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AUGUST CONTRIBUTORS

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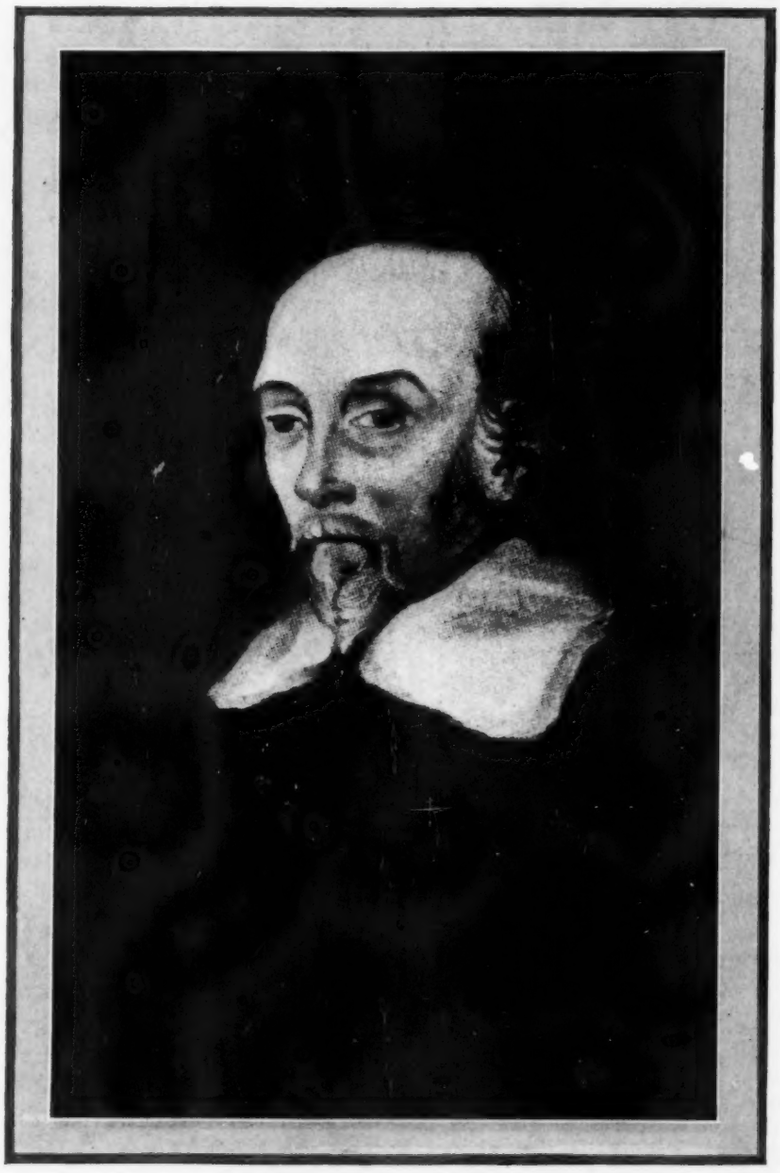


HEROES OF MEDICINE

V. William Harvey

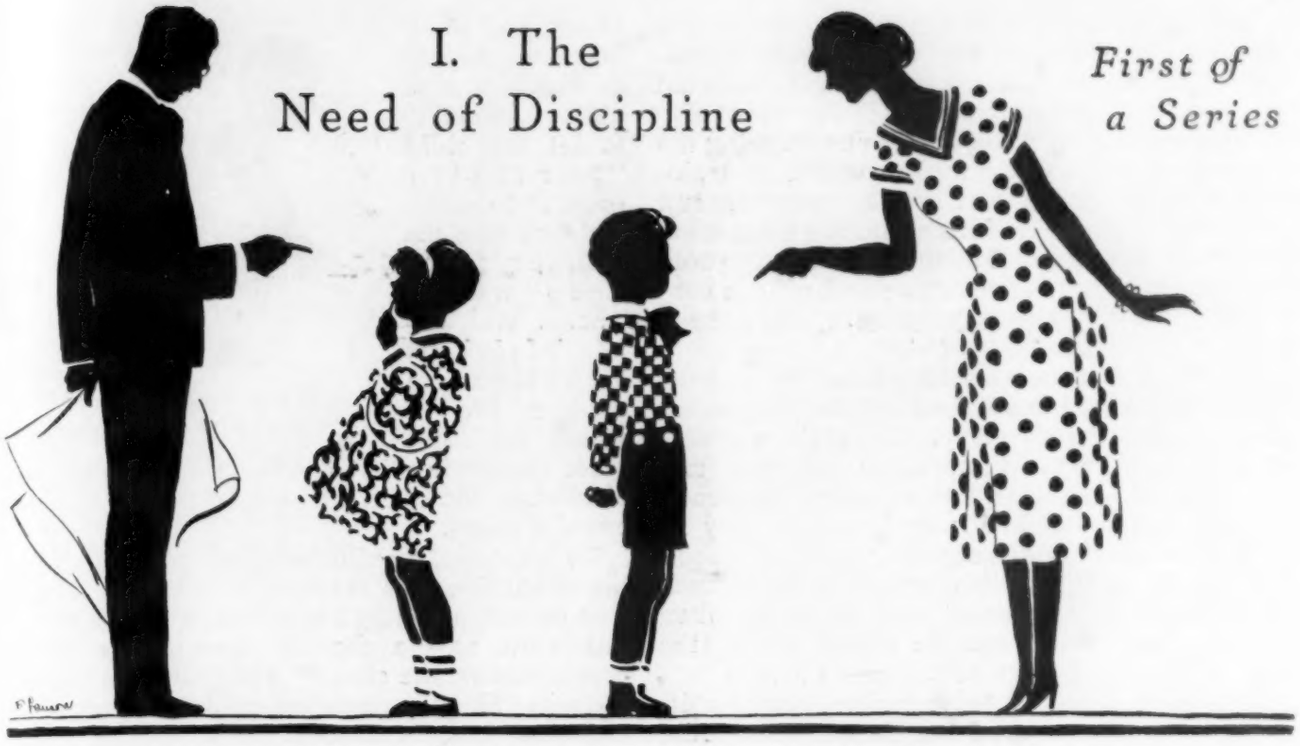
ONE of the greatest men of the seventeenth century was William Harvey, whose work is said to have exerted a more profound influence on modern medicine than that of any other man save Vesalius.

Born in England in 1578, he studied in England and at Padua, returning to practice in London. There, about 1619, he announced his great discovery of the circulation of the blood in and through the heart. A little later he made another valuable contribution to science, this time in the field of embryology, when he demonstrated that all animals are developed from the egg. His studies brought him unjust criticism and calumny at first, but before he died, in 1657, he had received the homage and honor due him.

In his attitude to science, he came closest to the Father of Medicine of any man up to that time. Modest and reserved, without any desire to vaunt himself, he gave laborious attention to details, working with great and daily diligence. Although he lived in an age when alchemy and mystery were more popular than science, he studied only those things that were within his comprehension, thinking, observing and watching the relation of things within his reach. His was the type of the truly scientific man.

I. The Need of Discipline

First of a Series



Training the Child to Obey

By Smiley Blanton and Margaret Gray Blanton

IT IS the task of the parent to teach the child to adjust himself in a successful manner to an ever changing environment. Discipline is the means by which this adjustment is attained.

Many persons think that discipline means the breaking down of unserviceable habits. They seem to think that the child has a large "vocabulary" of bad behavior, which must be corrected before the correct and serviceable types of behavior are given.

Must Build Serviceable Habits

Discipline, as defined by the dictionary, has two parts: The first is the building up of serviceable habits; the second is the modifying and changing of unserviceable types of habit. The building up of the serviceable habits is by far the most important part of discipline. If serviceable habits are built up in the first place, there will be no unserviceable habits to be modified.

Whether or not the idea that the child was conceived in sin is endorsed, he is usually thought to be an erring, erratic and disordered individual through his natural tendencies. This does not coincide with what is known of the original equipment of the child. A child is born with the capacity for forming habits, but he is not born with habits. Any unserviceable habit found in a child has been trained into him, either by accident or by intention, or by the very force of his environment.

When an unserviceable habit has been established in a child, it must be replaced by a serviceable one. It is impossible to break a habit without replacing it, just as it is impossible to think about nothing. When we say that a habit has been broken up in a child, we really mean that it has been replaced by a new habit. It has been replaced by a habit of a better and more serviceable nature and more in conformity with the wishes and the natural tendency of the child.

Child Must Feel Secure

The end of good discipline is to give the child a sense of security. The child needs, above all other things, the sense of security that comes with the certainty of how his mother or his father will take his actions. A child must not be left in doubt as to the rules that govern his conduct. These rules must be sensible and suited to the child's capacity. When this is not the case, there is lax discipline, and this shatters the child's feeling of security and often induces an anxiety neurosis.

The young child is inclined to build up one set of habits at a time, and we may take advantage of this in his training by trying to forestall the period of greatest rush. From about five to nine years of age, the child is undergoing the severest and the most complex part of his training. Certain habits that are the most difficult to inculcate should be formed before this period of stress. A large part of the disciplinary problems of the years between five and nine is concerned with things that should have been learned previously.

The control of the excretory functions and the establishment of correct food and sleeping habits may be learned quite early. The child may also be taught to dress himself, to ask, not cry, for what he wants, and to consider the group as well as himself in his desires. He may be taught certain things requiring implicit obedience more easily at this age than later, such as to stop when warned and to come when called. With these specific things out of the way, a great step is gained.

Failure in teaching these rudimentary habits is due oftenest to one of two things: The child is given a task unsuited to his age, or he is confused by an effort to teach him too many things at once. A child cannot learn all at once how to have good table manners, to keep quiet, to obey, to go to bed, to eat the food that is put in front of him, to go to sleep and to adjust himself to people. That is too complex. The lesson is too difficult.

Child Must Get New Habits Easily

It is also necessary to establish early what might be called an habitual type of response. That is, the child may be taught to get new habits easily and to meet new situations with the minimum amount of friction. This is quite comparable to teaching a child to read before he is required to learn the contents of books.

There are three classes of things for which children are corrected. First, there are things that are going to hurt the child, such as fire, deep water, poisonous things and unsuitable food. The person who learns to fear wisely is the well person. It is the person that has to pick up his fears in an untrained way and of the wrong objects that has the most difficulty.

Many educators recommend that children be permitted to get the experience with various things that hurt at first hand. It is true that a child may be given a slight burn so that he may learn the nature of fire, but it is quite impossible to let the child "partially drown" in order to teach him the danger from deep water. There are certain clear-cut situations in modern life in which the child must render implicit obedience. Without this obedience, the child will not be safe in dangerous situations.

To illustrate, a child brought up under rather lax discipline was starting to cross the street. The parent, standing back from the edge of the pavement, saw a rapidly moving automobile coming down the street. The child did not see the car. The parent called to him to wait. The child had been accustomed to say "Why?" and he said it then. As he said it, he moved in the direction of the automobile. It was due only to the speed of the automobile, which got to the spot before the child, that he was saved from death.

Those situations must be selected in which implicit obedience is necessary. We must explain to the child that he must obey when we say "Stop" in a certain way or "Be quiet" in a certain tone of voice. We must have some one signal that is a safety signal and that he obeys as instinctively as a trained army man obeys the word "Halt." This obedience can be made absolutely automatic.

Social Taboos

There is another group of situations in which we cannot reason with the child. Certain social customs may be classed as taboos. Taboo is an African word, meaning "the thing we do not do." In the building up of taboos in children, there are certain things that must be discussed. A child has to be told that he may not put his fingers around his nose.

But there are certain customs that may be called borderline taboos by which the child is much confused. Why may one not eat with the knife? Will he cut himself? Of course, he obviously will not. There is no reason for it; it simply is not done. Rather than try to make up some fairly obvious reason about cutting one's self, it is much better to say, "There are certain things that we do not do. There are certain things that are not done by the group."

If the child is given the theory of social taboos, and the parent does not take advantage of it to teach a large number of personal or outworn taboos and customs, then there is

established a type of control that the child recognizes.

The child understands taboos. He understands the system of taboos, and if we simply say, "This is something that is not done; you would not do this any more than you would be an Indian-giver, or a tattle tale," he will conform.

The third group of acts for which the child is often corrected is made up of those acts that interfere with the security and comfort of the group. Lying and stealing are acts that interfere with the security of the group. As regards the comfort of the group, there are certain allowable things that children may do. There are, certainly, also rights on the part of elders who, after all, are grown-up children. The adult has rights but the child also has rights. Children cannot be suppressed in respect to noise and activity. They must have outlets. The old adage that children should be seen and not heard is a doctrine against the child's psychology, and, one may be sure, was devised not by a child but by some adult who wished to do the talking.

Very often the child who has to live with elders and who has no room in which to play feels nagged, pushed and trapped. Often the contest between the parent and the child is a contest between two children, and many children get their infantile reactions from the behavior of their parents.

It is to avoid conflict during the hours when the resistance of both parents and children is reduced by labor and by the day of wakefulness that we insist on the necessity of a separate playroom for the children, remote enough that the noise from it will not reach the family.

[*Two more articles by Dr. and Mrs. Blanton will follow. They will deal with rewards and punishments.*]

Caring for the Premature Infant

By *Julius H. Hess*

THE future of the premature infant depends on a great number of things. The mother's health during the time of pregnancy is of first consideration. The presence of any disease, especially that of kidney or heart, or of tuberculosis or syphilis, will seriously affect the nutrition and chance of life of the infant. This is true of all infants but is especially true in those born prematurely.

Other things being equal, the nearer the full term the pregnancy terminates the better the infant's chance of life. Infants weighing 2 pounds or less have little prospect of surviving. Only about 25 per cent of those under 3 pounds live. Premature infants surviving the first week, and more especially the first month, have a fair chance of living. At least 60 per cent of those lost die during the first thirty days.

Defects in development, injuries during birth, exposure, feeding and infections constitute the dangers of the premature infant. Those having gross deformities and receiving serious injuries during delivery often die shortly after birth.

It is difficult to maintain the proper body temperature of premature infants, as they are especially susceptible to changes, either of heat or cold. So special beds have been devised, which are heated and enable a constant temperature to be maintained. Heavy clothes and coverings do not suffice. Many premature infants die because of improper care in this regard.

Feeding these infants is a serious problem, as both quantity and quality of the food influence their chance of living. Those fed on human milk have the best chance of surviving. When it is impossible to get milk from the mother, the value of breast milk is such that, if possible, it should be obtained from another healthy mother, one free from tuberculosis and syphilis. Milk so obtained should be sterilized before it is used to avoid infection from any contamination.

The lack of strength of premature infants usually prevents them from nursing directly at the breast or from an ordinary nursing bottle. Feedings are given with a medicine dropper or with a catheter. It is important that these infants receive sufficient food as they require more in proportion to their weight than full term infants. The amount that they can take at one time is small, necessitating frequent small feedings.

A sweetened condensed milk, while furnishing food in a concentrated form and having a high caloric value, is not to be recommended for any extended period.

Premature infants have little resistance to infection. Contact with persons having colds, sore throat or more serious conditions should be carefully avoided. The progress of premature infants is comparatively rapid. The birth weight is frequently doubled by the end of three months, compared with five months in full term infants. Very small premature infants make slower progress and require even more careful attention during the first months.

Ewing Galloway

Swimming Holes——

By
E. H. CARNOLD

AT THIS time of the year the papers throughout the country are beginning to report drownings, with increasing frequency. Drownings constitute a large percentage of accidental deaths. Death by drowning is to be classed, however, as an avoidable accident.

The swimming hole is a comparatively safe place. It is situated on the bend of a shallow brook or small river where the current has dug out a deeper place in a soft mud or a clay bank. The water is usually not deep. The current is pocketed and not swift. The dimensions of the hole are comparatively small. From 8 to 10 feet square is a sufficient space to serve the boys' purpose. Here even the nonswimmer, if he pushes off with sufficient vigor, may flounder to the opposite side with safety, bystanding boys giving a hand if necessary.

The dog paddle is usually the first attempt at swimming. Most four legged animals are able to swim simply by walking into the water and continuing the walking movements. It is said that the infants of the South Sea Islands crawl into the water before they are able to stand and, continuing to crawl, learn to swim like a dog. I should not recommend this for infants in America. The little boy, however, is sufficiently near the infant stage to remember crawling and to get on after a fashion with the dog paddle. That there is something to the crawling theory is attested to by the name of a well-known and efficient stroke, the Australian crawl.

Some rules should be firmly impressed on every one going in for a dip or swim. If a nonswimmer, a person should never wade in water deeper than the middle of the chest, unless he knows the bottom of the pond, brook, river or coast well. By accidentally stepping into a hole, one may be carried away by an unknown current, if the body is buoyed up too much, which is the case if more than two thirds of the body is

H. Armstrong Roberts

——Old *and* New!

With RULES *for* BATHERS

submerged. If a beginner, one should never swim in water that is beyond his depth. Even a good swimmer should never venture beyond easy reach of succor. It is not good policy to go in swimming alone whether one is a good or a poor swimmer.

It is well to have a boat or a canoe handy and some one in or near the boat or canoe, to act in case of accident. One should not swim farther away from the boat than could be traversed in a minute, say no more than 50 yards. Life saving by swimming is an art by itself; it is not easily mastered, and one should rely on it only in case of direst necessity. It is much easier and safer to make rescues from a boat or canoe than by swimming.

One should learn to swim for distance or endurance. A person that has not passed an endurance test in swimming should not be allowed to swim in deep water. The endurance test generally used in Germany prescribes thirty continuous minutes of swimming any stroke.

The first time such a test is taken (the swimmer should always be accompanied by competent persons in a boat) the swimmer finds that after ten or fifteen minutes he has a feeling of oppression and of great anxiety. The heart beats fit to burst. The swimmer becomes breathless and bewildered. An insane fear masters him. He gives up swimming and threshes wildly in the water. He may readily drown. It takes courage and assurance to overcome this difficult period in endurance swimming. The swimmer has lost his wind. If his heart is normal and strong, within a minute it will readjust itself, and the person can go on swimming for an almost indefinite period, for hours. This loss of wind accounts for good swimmers drowning without apparent reason.

Loss of wind occurs in persons with heart lesions much more frequently than in normal persons. It is doubtful whether persons with

heart lesions should ever undergo such an endurance test, either imposed or voluntary. They may with safety swim shorter distances and then recover on land. Any one should make sure about his heart before he undertakes long distance swimming.

How long ought one to stay in the water? The little boys at the swimming hole dive in, traverse the short distance once or twice and then sport on the banks. In between dives they take a sun and air bath, which is as beneficial as the water bath, if not more so. To stay in the water continuously for any length of time is apt to chill one through, especially if the water is cold.

Shallow brooks and inland rivers as well as ponds and lakes warm through early in summer and keep their warmth fairly well into the autumn. One could stay in them without a chill quite a length of time. Deep rivers and lakes, as for instance the Great Lakes, and the ocean never warm up to the same degree, and one is apt to chill in a short time.

Athletic men often chill through early, while stripling girls stay in the water for a long time without chilling. The explanation is easy to find. The athletic man has a thin skin with only a scant layer of fat between skin and muscle, and the cold penetrates into him and cools him off quickly. Girls, after they are in their teens, have a liberal upholstering of fat under the skin, and they stand the cold water much as a walrus or a whale would. The great strides that have been made by women in the art of swimming are attributable to their staying quality.

But, whether man or woman, one should never stay in the water long enough to feel chilly. Short swims and then some romping or playing on the bank or shore are the proper thing. Comes, of course, the kind sunshine and gives a sunburn, if one is not careful at first exposure. It is especially the city folk unused to open air swimming that are apt to stretch themselves out on the sand of lake or seashore and allow the sun to give them a bad burn.

To Prevent Sunburn

A sunburn is never agreeable and sometimes is dangerous. It has been said that even a light burn of more than half the surface of the body may prove fatal. It is, then, not wise to expose a great deal of the body long enough for a light burn or any part of it for a deep burn. A sunburn on water or seashore gives nearly double the amount of burn, for one is subjected not only to the direct rays of the sun but to those reflected by water and sand.

A broad brimmed hat may not prove a protection against sunburn of the face since the reflected rays get under the brim. Especially annoying are the sunburns of the lips. They are not only painful but, if infection of the blister takes place, may give rise to distressing inflammation of the face lasting for weeks. When one intends a sojourn at the seashore, it is best to cover the top of the nose and the lips with a heavy layer of a good cold cream and to apply liberally cosmetic dusting powder to prevent annoying sunburn.

The proper thing is to expose any one part of the body only sufficiently long to bring about a gradual tanning. Once the tan (a deposit of coloring matter, or pigment, in the skin) has been attained, it serves as a protection against the sun's rays, and one may venture to expose oneself more and more without bad results.

Sun and air baths are undoubtedly highly beneficial and desirable. The scant swimming suit is to be regarded as a hygienic garment on account of its mere scantiness. Whatever objection to it the moralist may have, the hygienist can only welcome the fashion. It has made possible the spread of swimming among women that the last decade has witnessed.

Forty years ago, even at the seacoast, a woman swimmer was a rare sight. Inland, I recall only one place where a woman swimmer might be seen in public, in the open and in company with men; that was in Milwaukee. Swimming in inland waters was not very generally practiced even among men. Besides the swimming school in the Milwaukee River, I recall only two more, one at the foot of Vine Street in Cincinnati and an indoor pool at St. Louis. What wonderful progress has been made since then! Now women rival men in swimming feats and diving.

Dangers in Diving

In diving, the proper way to enter the water is to plunge or dive in. But when diving, one should know beforehand that the water is deep enough for a deep vertical dive. One of the easiest and surest ways to break the neck is to dive in shallow water. Not a year goes by but that several deaths are recorded from foolhardy diving.

Another danger that lurks in diving is injury to the middle ear, which is too often followed by disastrous results to hearing. Such injury may be avoided by protecting the outer ear canal. A fairly satisfactory method of doing this is to insert a properly fitting rubber ear stopper; the ear stopper must be water tight. A plug of cotton dipped into vaseline is likewise often efficient. It is quite difficult, however, to fit either the rubber stopper or the cotton so that it is water tight. Between dives these plugs should be removed, if any water has penetrated into the outer ear; the water should be removed and the plug reinserted.

One should be careful not to stay or to swim under water too long. The air pressure accumulating under such circumstances is not good for the lung tissues or for the heart.

Mouth Washes and Dentifrices

By Bernard Fantus

Underwood & Underwood

The baby's first teeth are always objects of great interest to fathers and mothers. Wise parents will not let their interest in the child's teeth lag.

ANTISEPTICS are the prominent ingredients of most popular mouth washes and dentifrices. Their use is based on the now generally accepted theory that micro-organisms have something to do with tooth decay. The notion seems to prevail that, to save the teeth from decay, one must exterminate these micro-organisms of the mouth. It may therefore shock many to learn that antiseptics are entirely superfluous in mouth hygiene.

The mouth micro-organisms cannot be exterminated by any known agency, for poisons that could be relied on to kill bacteria would also kill the cells lining the mucous membrane of the mouth. The skin can be sterilized for surgical purposes by the use of tincture of iodine or of 1:1,000 corrosive sublimate solution, because the surface layer of the skin is dead, just as dead as are hairs and nails. The same agents applied to a membrane covered with living cells, as are all the mucous membranes, would harm the surface cells more than the bacteria.

Can't Keep Mouth Sterile

Even if the mouth could be sterilized, it could not be kept so; for, as soon as the mouth is opened, it would probably be contaminated with the nearly omnipresent micro-organisms.

Bacteria do harm only by means of the poisons produced during their growth and multiplication. If, therefore, bacteria can be kept from proliferating, their presence is not objectionable. There are antiseptic agents, more properly called bacteriostatic agents, that are capable of preventing the growth of micro-organisms when used in concentrations inoffensive to the tissues of man. Boric acid is an example of these.

Such agents can prevent the growth of micro-organisms only when present in a certain concentration. As soon as the concentration is diminished, the inhibitive action is at an end. This is what happens to them in the mouth, because the saliva soon washes them away. Merely preventing micro-organismal growth for a few minutes and then permitting it to run riot for the rest of the day is obviously of no use.

Starving the Micro-Organisms

There is one way by which objectionable forms of life can be kept down; that is by denying them the means for subsistence. Without food, micro-organisms cannot multiply. By keeping the mouth free from food particles and other dead material, their proliferation can be minimized to such an extent that they can do no harm. Indeed, by means of the flow of saliva, the mouth has a self-cleansing tendency, which would be entirely sufficient were it not for natural crevices, as between the teeth and

the teeth and gums, that may catch and hold dirt and keep it from being washed away.

The crevices must be kept clean mechanically. Savages and the lower animals do this by means of their coarse food. Modern man employs an elaborate process of food refinement and softening, whereby all harsh and hard particles are removed from his food before it enters the mouth. Because civilized man is the only animal that cooks, he is also doomed to be the only one that must brush his teeth.

But it is hardly fair to blame man's food entirely for his great tendency to tooth decay, which is unparalleled among the lower creatures. It is partly due to the closeness with which the human teeth are set together in the remarkably small jaw bone, which has developed as a result of natural selection. What is called beauty in man and woman, which has so much to do with sexual selection and mating, emphasizes the characteristics that differentiate them from the beast. Man has exchanged a magnificent mandible with plenty of tooth space for a bone absurdly small to carry so many teeth. Hence the teeth are liable to be set so closely together that only by use of dental floss (tooth picks may injure gums) can the space between them be kept clean. Rickets and other diseases of civilization further interfere with the proper development of the teeth, often crowding them together in unnatural positions.

Where food material gets caught and stays, there tooth decay begins. Decay may, of course, be due to other causes, such as faulty formation of teeth. Once a cavity has commenced in a tooth, the tendency for food to be caught in it and the difficulty of dislodging the material yield a progressively better nest for luxurious bacterial growth—warmth, moisture and food being constantly supplied—and the cavity becomes larger and larger until the tooth is finally destroyed. Hence man must keep his mouth in a cleanable condition. This can be accomplished only by periodic visits to the dentist, by brushing and washing the teeth at least twice daily (morning and evening), and by brushing correctly with an up and down or a circular movement.

Mouth Wash Essentials

The tooth brush should be aided by liberal quantities of warm water swished back and forth between the teeth. It is quite immaterial whether or not anything is added to the water, except as it makes the water more pleasant to use.

As a result of laborious laboratory research, mouth cleansing preparations of least toxicity and greatest possible antibacterial action—which, as is now understood, is of no real importance—have been devised, only to be speedily forgotten, unless they had a pleasant taste and odor. Such preparations people seem to want. Man, it seems, desires to improve on the raw materials of nature. He spends more than his naturally tasteless food costs to impart to it flavor and attractiveness. Similarly, he is not satisfied with using plain water for his mouth wash, but prefers to flavor it.

Whether oil of peppermint, of cinnamon, or of clove is used is merely a matter of taste. A mixture of these is probably better than either of them alone, because a bouquet of flavors does not pall on the palate as easily as a strong pure flavor.

One can sweeten a mouth wash with saccharin and color it with basic fuchsin, which would give a formula like the following:

Saccharin	0.20	gm.
Basic fuchsin	0.002	gm.
Oil of cinnamon	0.50	cc.
Oil of peppermint	0.50	cc.
Oil of clove	1.00	cc.
Alcohol, to make	100.00	cc.

A few drops of this added to warm water suffices to impart the desired esthetic qualities to the ordeal of mouth washing. There is nothing special about this formula. Any other flavor or flavors may be preferred and substituted. Some may not like the sweetness, and they may omit the saccharin. The red coloring is quite unimportant.

The mouth can be washed just as efficiently with plain warm water provided plenty of it is used, and a good tooth brush properly used. This is superior to sprinkling a few drops of a preparation on a tooth brush, and using it in lieu of thorough mouth washing and rinsing.

Most Tooth Decay Occurs During Night

Evening, before going to bed, is the most important time for mouth washing, as during the night salivary secretion is at lowest ebb and the self-cleansing of the mouth is poor. For this reason probably, most tooth decay occurs during the night, when, if a culture medium is present, the micro-organisms can produce their poisons undisturbed. Because acid is believed to be the chief means by which the calcium salts of the teeth are attacked and dissolved, alkali has been advocated as an important ingredient of mouth washes. A little reflection will show that, as the alkali does not stay in the mouth, the momentary neutralization of acid while one is washing the mouth can be of little importance in view of the hours and hours during which acid is produced and does the damage.

When the gums are soft and swollen and bleed easily on brushing, as occurs in pyorrhea, the use of an astringent in the mouth wash is of advantage. This can be most economically obtained from the drug store in the form of glycerite of tannic acid, a few drops of which, added to warm water, will impart to it the desired gum hardening tendency.

International

Girl students at the University of Pennsylvania dental school are placarded in preparation for the seventh international dental congress, to be held in Philadelphia in August.

Tartar, an insoluble substance consisting of salivary mucus and other organic matter and of calcium salts, may tend to deposit on teeth, especially if they are not kept clean by correct brushing. In the removal of tartar the occasional use of detergents is of value. As these are abrasive substances, which may wear away the precious enamel of the teeth, they should not be used frequently; the more efficient, the more dangerous they are. Thus powdered pumice stone, a wonderfully active polishing agent, should be taboo in dentifrices. Prepared chalk, a powder, is the safest tooth detergent, and will be found by all users to be as good as any fancy flavored and priced tooth powder on the market.

A formula for a tooth powder, sweetened, flavored and containing soap, may be found in the National Formulary—a book of formulas in the hands of all American pharmacists—which offers a choice among five different flavors. Soap is of vastly less importance as a cleansing agent in the mouth than on the skin, because the dirt that tends to accumulate in the mouth is not of fatty nature as is the dirt on the skin, the latter being a compound of dust and other materials with the fatty secretion of the sebaceous skin glands.

Tooth pastes are more portable and perhaps somewhat more convenient to use than tooth powders.

For persons who can easily afford it and who, either because they like the taste or because they have faith in some alleged special virtue, employ flavored mouth washes, tooth powders or pastes more regularly and religiously than they would use plain water and chalk, these are after all a good investment. Let no one say, however, that he cannot wash his mouth because he has nothing to wash it with.

Common Sense in Mouth Hygiene

THIS is the title of an intensely practical article by William M. Gardner, D.D.S., which will appear in the September HYGEIA. *Seven excellent illustrations show the varying contours of dental arches, the right and wrong kinds of tooth brush and the right and wrong methods of brushing the teeth. Other dental health articles will follow.*

What *of the* Nervous Child?

By
EDWARD E. MAYER

A restless, fussy, dancing mother cannot expect a quiet, demure daughter who will obey her orders to stay at home.

NERVOUSNESS is a term in everyday usage. It is an indefinite term and has many meanings. It implies worry, fear, restlessness, sleeplessness, nightmare, tantrums, moodiness, morbidness, anxiousness, twitchings, spasms and even weakness, brooding or despondency. To say that one has had a nervous breakdown is to use an expression that is likewise indefinite. There is, nevertheless, a common background to these descriptive terms. What is meant by nervousness seems to be a lack of ease, a sort of restlessness or distress that is mental rather than physical.

What is a nervous child? The foregoing attributes of nervousness indicate how difficult it is to answer this simple question. A nervous child may be a sick child, a backward or a retarded child, a spoiled child or a child with some inward emotional conflict.

Parents Are Often the Cause

Much nervousness in children is a direct result of parental influences. Such sources of nervousness in children are often disregarded.

Poor health due to malnutrition, anemia, bad tonsils, glandular disease and fatigue will, of course, make a child start to twitch and will make him irritable and restless. These are in fact the common causes of nervousness, and such sources for the disorder should first of all be sought. As a rule, nervousness shows itself early in the course of or immediately following an illness. Occasionally, however, it follows in the wake of some slower acting or chronic illness.

Living things require a free, harmonious interaction of the activities of all their organs. A human being is no exception. All organs of a child ought to function with efficiency in order for him to have an easy, cooperative adjustment between body and mind. These two are inseparable components of the human machine. They ought never to be considered apart, for they obey the same laws of energy. School records show that 52 per cent of the children at school need some surgical treatment. The body being ill, the mind suffers with it. So, many of these children are nervous.

Must First Look to Child's Bodily Health

When, however, a physician declares, after a thorough examination, that there is no physical basis for a child's nervousness, he does not mean that it is an unreal or imaginary state, but only that its correction is not a matter of drugs or of the surgeon's knife. I have known mothers to scold their children for being nervous, after the doctor has found no physical illness. Mothers need to be taught that scolding is in itself a source of nervousness in a child. So, too, is its opposite—oversympathy or coddling. The balance wheel of common sense needs to be carefully adjusted by parents between too much and too little discipline. It is true that some children do grow up like Topsy, untrained and unregulated. It is true that many children fail to become nervous no matter how they are brought up. Haphazard bringing up fails to detect the beginnings of nervousness until its expression in impulse or emotion becomes set or conditioned and is elevated to the dignity of being called a neurosis by the physician. On the other side of the picture is an overemotionality or an obstinacy developed in the only child because of too much attention.

Often nervousness is a family problem; the child is imitating his restless, complaining

mother or both are troubled and worried by a scolding, autocratic, domineering, perhaps alcoholic father. Often a selfish system of don'ts — social as well as religious — is back of a child's nervousness.

Quarreling between parents may sometimes be unavoidable, but if it must take place, an attempt should be made to keep it from the children. Nervousness can come merely from witnessing scenes between parents and worrying about them.

If a child must be disciplined, he should not be humbled and shamed by having other children of the family present during the corrective efforts.

Some children are afflicted with parents who treat them as if they had no minds of their own. They are given no chance for self-expression, and they are not permitted to develop an independent personality. They are taught to repress rather than to express the normal development of self. Of course, they become nervous.

Giving the Child a Proper Outlet

If parents win their child by stimulating his interests and not asking him to conform to their own, they will find that they create for him a normal channel of expression. This gives his energy a proper outlet and prevents nervousness of many sorts. This is the secret of adjustment. By adjustment is meant securing efficient, easeful relationship between body and mind, between self and environment. The physician's part consists in determining in what ways persons fail to respond to situations and what are the common causes for poor responses, and in advising nervous persons how to overcome, circumvent or dissipate these causes. Adjustments on the physiologic side are very important in childhood in connection with the development of personality, especially in relation to sex responses.

A child should not be shamed by having other children of the family present during corrective efforts.

The impulses originating from the flow of sex energy are often directed by children into useless channels, such as masturbation or thumb sucking. The parent watches the child's misdirected impulses in noise or pranks and endeavors to direct such expressions of energy into other and more useful channels. This is what must be done with sex impulses, and it is called sublimating them. Many cannot view sex except in their own narrow personal attitude. They cannot realize that the libido, or flow of energy, that with them is channeled into definite paths of affection or sentiment exists with children, although still impersonal, and that it is without aim or goal and has not become attached to any love object.

Affection toward one parent is often accompanied by aversion for the other parent; nervousness may occur for this reason, in adolescence, when there looms some one outside the family circle to whom the libido becomes attached. The parental love attachments then become transformed into a secondary phase of the affections. Sometimes love for parent prevents any flow of energy toward the other sex, because the child has developed a fixed idea of the omnipotence or god-power of a parent. The internal conflicts that accompany these manifestations are the causes of much neurosis. An insight into the family situation means, as one can see, more than a survey of the social and economic status.

Parents are fortunate in having opportunities through mental hygiene programs, child welfare organizations and psychologic clinics to get help in solving problems of this kind. For nervousness originating from sex and ego sources needs professional advice of a special nature.

Children Must Be Taught Useful Habits

A regulation of habits is necessary in order as far as possible to avoid the emotional effects of misdirected energy. Children must be taught adequate and useful habit systems. The flow of life's energy is often displaced and checked through what are called environmental or chance causes. Children must be guided against permitting fears, anxiety states, suspicions and worries to influence their lives. The roots of these attitudes of mind must be eradicated or substitutes found for them. To ferret out the chance situations that have initiated them is necessary if correction is attempted. This brings such cases into the domain of medical psychology, which studies exaggerated and overemphasized traits, moods and impulses and

especially such survivals of primitive life as fear and rage.

Parents should learn which are good and which are bad habit systems and should teach a child the good ones in connection with his desires, his strivings, his morals and his emotions in general. Good mental habits are as important as are those usually taught in reference to eating, sleeping, bathing, play and exercise. It is surprising how many children are untrained in respect to these simple conditions of living.

In planning good habit systems for the child, perhaps the parents will discover that their own thought habits have slipped and that they need to take themselves to task, perhaps with respect to loyalty and dependability. Are they victims of procrastination? Are they inordinately selfish? Are they obstinate, moody, unfair or vulgar? Do they have too many outbursts of anger, petulance or fright? Have they grievances, grudges or resentments that are interfering with their mental adjustments? Have they forgotten how to laugh or to relax?

A restless, fussy, dancing mother cannot expect a quiet, demure daughter, who will obey her orders to stay at home. A gambling, swearing, lying father cannot expect a different sort of son. Often children are made nervous through the difference between the standards of parents and of those set up for them.

Delinquency Often Due to Family Life

Delinquency, implying an offense against the social order, is often due to such causes. The source of a conduct disorder will be found in family environment as often as in the personality of the child involved in a particular delinquency. This is true not only in the family of the poor but also in that of the well to do. There is prevalent a belief that the children of the rich are different in conduct from those of the poor. Those who deal with behavior problems know otherwise; so, also, do reasoning parents.

Nerve specialists make much of conflicts as a source of nervousness; conflicts because of the variance between the practices of the parents and their teachings, conflicts between the ideals of childhood and the sordid realities of life, and conflicts between fancies and actualities.

Childhood is a plastic age. This platitude must be repeated and repeated until parents have it driven home to them. Children's mental habits must be molded early, before bad ones are formed and become set or conditioned. The wish to be ill or flight into disease is a subconscious attitude of mind that physicians so often contend with. It can be prevented during childhood's days. The self-centered child, the too-shy child, the overselfish child need attention as much as does the underweight child, the constipated child or the thin-blooded child. Conscience ought to be trained in childhood in terms of health as well as in terms of morals.

Child Should Acquire Spiritual Resources

If parents have lost faith in humanity and no longer have religious convictions, they should not deprive a child of his chance to acquire spiritual resources. Experience has shown that faith and hope aid in counteracting much of the frustrations and resentments that spoil character and distort personality. Because of this, however, one should not confuse the issue and believe that spiritual measures remove the necessity of taking care of true physical illness.

Parents will do well to have an expert opinion of how they and their children should live, expressed in terms of their surroundings and their experiences. Such a survey can be made and an opinion given, just as in business affairs. The training of children is actually a business in itself. Prevention of most kinds of nervousness is possible if parents train themselves to their task.

Modern Treatment of Tuberculosis

The Essentials Are Rest, Fresh Air and Good Food; the Greatest of These Is Rest

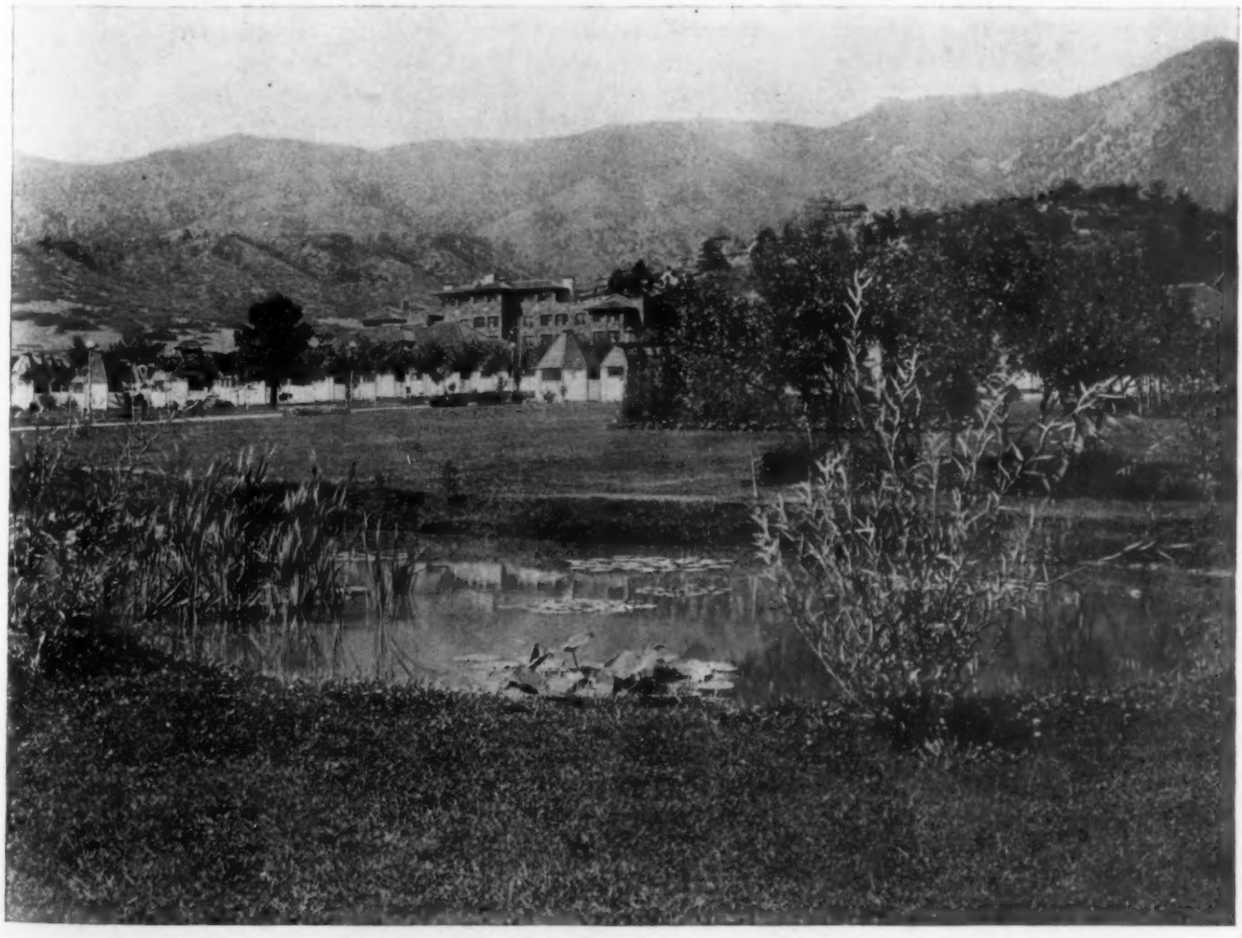
By
ETHAN ALLEN GRAY

THE present treatment of pulmonary tuberculosis is based on three things: fresh air, proper food and rest. The greatest of these is rest. All repair of diseased tissue is best furthered by complete rest of the diseased part.

At first thought it is difficult to realize how a diseased lung can rest. The lungs are busy from the time a person draws his first breath, and they continue to act as long as life lasts. It is possible, of course, to put one lung at rest by surgical means, but what about two lungs, both of which are diseased?

If the lungs cannot be put at rest, it may be possible to give them less to do. With increased physical activity, we breathe more than when we are resting. This gives us a clue to the rest cure. A simple way to afford rest to sick lungs is to give them less to do; the way to give them less to do is to do less ourselves. The way to give them the least to do is to go to bed and stay there.

We breathe normally eighteen times a minute, when we do not exercise; sometimes we breathe less than that. When we exercise, we breathe



Among such inspiring scenes patients chase the cure at the Modern Woodmen of America Sanatorium, Woodmen, Colo. A colony of cottages surrounds the main hospital.

many more times than eighteen a minute. When the lung is diseased and when fever is present in a person that is not resting, the lung works more than is good for it; let us assume, twenty-six times a minute. Now, the normal rate, 18 breaths a minute, means 1,080 an hour and 25,920 a day. If the sick lungs work at the rate of twenty-six a minute, it means an excess of eight times a minute, 480 an hour and 11,520 a day. This means 11,520 unnecessary breaths a day.

What has been said of overwork of the lungs may be said of the heart. This organ beats normally seventy-two times a minute. It can beat faster, so fast, indeed, that it wears itself out. Let us say that it beats 102 a minute when under the influence of the poison of tuberculosis and exercise. This means thirty extra beats a minute, 1,800 an hour and 43,200 a day. Is it any wonder that the consumptive is easily winded?

Now, what happens when the patient is put at rest in bed? Often he finds out for the first time how very tired he is. He knows that he has had no appetite. He cannot have had, when his digestive apparatus has been fed with poisoned blood. But when the blood stream slows down, when the poison does not circulate so fast, he finds that he can eat. He notes that he coughs less and probably has less fever.

How simple it seems: rest, less fever, less poison, more appetite, improvement. But it is not so simple; resting in bed is hard, once the first exhaustion is passed. Let any one who thinks that prolonged rest in bed is easy ask some one who has made the cure. Rest sometimes means years in bed, but it is worth it, when the end is regained health.

Collapsing One Lung

Lungs are not always cured by simple rest in bed. One may resort to an operation known as lung collapse; otherwise called artificial pneumothorax, or gas treatment. This procedure consists in passing filtered air into the chest cavity for the purpose of collapsing the lung or letting it close down on itself. The diseased areas and cavities become contracted or squeezed together, gently, of course. As a consequence, the poison is prevented from pouring out in such large quantities. As a further consequence, the body is relieved of much of its burden of disease and so becomes more resistant. Fever is frequently reduced to a wonderful degree, and the patient feels greatly improved.

The lung thus treated by pneumothorax remains closed in some cases for years, giving the organ an enforced rest, which not only allows it to make progress toward healing, but which increases the disease resistance of the body. In these cases, when the lung reexpands, if it does reexpand, the patient is so much stronger that he can live down his tuberculosis.

The question often asked by prospective pneumothorax patients is, "Shall I have the use of the lung again after the period of gas treatment is ended?" The answer should be, "If you have good luck, you will never have that lung in use again." The lung is bad; that is why it was closed. It will do more harm than good if it is brought into action again. The final results of this treatment, like those of other kinds of rest treatment, are good. Patients have often returned to work with one lung permanently collapsed. And return to work is what the consumptive always has in mind.

Not all cases are suitable for lung collapse; for instance, when there is too much damage in the opposite lung. In those cases in which a collapse cannot be done by reason of adhesions between the lung and the chest wall, there has been more recently devised an operation that brings about a collapse of the chest wall by means of the removal of several or all of the ribs on the affected side.

This operation is, of course, a more serious proceeding than the admission of air into the chest cavity, but its results have been encouraging in that, in not a few cases, years have been added to the lives of patients who would otherwise have died. I have in mind one young woman who had been in bed for six years with never ending fever. As the result of removal of her ribs on the affected side, she is now up and about every day.

The tuberculous person ought to have anything he can eat and digest. A few years ago it was held necessary to overfeed all patients that were ill with tuberculosis. The result was that in some cases there were great gains in weight, but in others the stomach was upset and the digestion, already weak, was broken down. Physicians do not try to fatten patients any more. If the patient gets well, he will get fat soon enough.

Prepared foods have no special place in the dietary of the tuberculous. If the patient cannot eat what well people eat, there is something wrong with him. He should not be tempted to eat beyond his desires.

All Patients Cannot Sleep Outdoors

Fresh air is essential for the tuberculous. A famous physician, a few years ago, said, "Too much fresh air is just enough." But physicians have now learned that too much fresh air is too much. They used to put patients out on wind-swept porches in winter weather; they had a hard time of it to keep warm. It is well enough for tuberculosis patients to be outdoors if they are comfortable, because they eat better, sleep better and cough less. But patients for outdoor sleeping must be selected; many of them have so little resistance that they cannot keep warm. An airy room is plenty open enough in winter, if there is free circulation of air. Windows can

The gardens of Cragmor Sanatorium, with the Rockies not far distant, are shown in the photograph at the right.

Winter only adds to the beauties of the country around Trudeau Sanatorium, Saranac Lake, N. Y. Below is one of the early cottages for tuberculosis patients at Trudeau.

be closed or opened, according to the varying necessities of the case. Persons that intend to live outdoors must learn how to dress for the open.

But the main point in treatment is the patient's ability to stick. He himself must do the work. It rests with him whether he is to be faithful to the job. Would it not be much easier if he could have a "shot in the arm" and let it go at that? Would it not be a comfortable feeling to know that there was a bottle from which he could take a spoonful now and then, and let the medicine do the work?

Another mistake in treatment was to send the patient off to a health climate, regardless of his condition. Health climates are good, it is true, but the patient who is to derive any benefit from them must be selected. Not all improve when they are sent away. The poor fellow who goes away from home must be supplied with sufficient money to enable him to rest and thus get the most out of his climate change. This matter was often overlooked by those who advocated leaving town on the next train. Friends often donated enough to pay for the railway ticket, but they rarely gave enough to keep the patient from going hungry. It costs money to live in any climate.

Those who are in their sick beds know that chasing the cure is a long chase; they know that they must do it themselves. That is the worst of it; having to do it all themselves.

Winners in Hygeia Health Photo Contest

THE 511 pictures submitted in the HYGEIA health photo contest were nearly all of children. Outdoor exercise, cleanliness (including washing, bathing and tooth hygiene), sunbaths and correct food and eating habits were the chief health items illustrated.

Nearly all the states in the Union were represented, from the cotton fields of the sunny South to California orange groves, and from New England snow drifts to Wisconsin and Minnesota lakes. A number of pictures were received from Mexico, Canada, France and even Syria.

Every style of amateur picture was sent, from the tiniest snapshots to cabinet size portrait photographs. Included in the entries were many from public health nurses and teachers, showing school, camp and clinic activities in correcting defects and teaching health habits.

The prize winning pictures and one of those that were awarded honorable mention are shown in this issue. Other photographs showing artistic merit combined with health interest will appear in the September and October issues, payment being made for those published.

First Prize. Photo of Marjorie Coplin in Lake Michigan, submitted by Frank Leinhaupel, Chicago.

Second Prize. Photo by Denver Y. W. C. A., submitted by O. E. Gunkle.

Third Prize. Photo of William Cunningham Crittenden, Corona, Ala., submitted by his parents.

Submitted by Michael Greenan, Pawtucket, Rhode Island.

Home Cooling of Foods

By WILLIAM B. SHARP

MAN discovered long ago that foods taste better or keep longer if kept cool. He therefore put them in underground cavities, in buckets lowered into stream or well, or wherever else they would gather as little as possible of the summer's heat. Active withdrawal of heat from his foods, a development of the past few generations, has added still more to their palatability and keeping qualities. It also leaves man exposed to fewer food-borne diseases.

Heat is withdrawn from foods by means of melting ice or by the vaporization of certain liquids; the former method is now utilized very commonly. Just as water becomes ice when a frigid winter takes away its heat, so in order to return into water again the ice must reabsorb the amount of heat lost. Refrigeration of foods simply means placing foods so that they may give the melting ice their heat. The practice has everything to commend it.

Tea and other beverages are usually iced directly. The objections often raised to this practice have little hygienic reason. The constituents of ice are those of the water frozen, perhaps with the addition of ammonia, and that never in harmful quantities. Any danger to health lies in the ice coming from polluted waters. While all germs of disease are crushed by the crystallizing of ice about them or succumb to the cold eventually, many may escape crushing in more or less bubbly ice and for months survive the cold.

In China, neither natural ice nor anything else may safely be consumed raw, owing to the prevalence of infective contamination. Chinese ice is cut from waters too heavily polluted to become safe during storage.

The most notable instance of ice-borne infection in America occurred beside the St. Lawrence River, in 1902, when a number of persons using ice cut from a polluted spot in the river were attacked by typhoid fever. This ice had been stored several months, but the germs could still be found in samples of it.

Such instances of infection attending the use of American ice are exceptional. Unpolluted waters are too abundant. Any little contamination that does reach the ice is in the dirtier surface layers and can be planed off, or it dies out in storage.

What danger there was from this source has largely disappeared with the advent of artificial ice. Water is frozen in blocks by lowering the molds of it into mechanically chilled brine. Pollution of the water used may have occurred formerly, but it disappeared with the distillation employed to avoid bubbles. Sometimes raw water is used now, the bubbly central core being replaced with clear water during freezing, but with today's improved sanitation any danger of polluted water has passed. Contamination from dirty sidewalks can reach the surface of ice, but most of this washes off.

At worst, the practice of cooling foods has opened only one avenue of infection, whereas it has closed several. Modern public activity to control milk-borne disease is fully effective only if the milk remains chilled until ready to be consumed. Without refrigeration there is more summer complaint among babies and more infectious disease. Germs of typhoid fever, scarlet fever and diphtheria have often reached such numbers in warm milk supplies that epidemics arose along the milk routes.

Home refrigeration plays only a small part in restricting the infective agents in solid foods. Infective organisms often occur in freshly killed meats or poultry and less often in the storage products; those not destroyed by cooking or reaching the food thereafter multiply less if chilled. Refrigeration is not as important in this instance as thorough cooking and

Will electric refrigeration supplant the ice man?

avoidance of subsequent handling by infected persons.

Retardation of spoilage, the primary function of domestic cooling, is not so directly a health consideration. The decomposition products known as ptomaines, once thought a principal cause of food poisoning, have more recently been found not to reach poisonous concentration until the food has obviously spoiled. Health is served in a way, of course, whenever food is withheld from the bacteria and molds of spoilage.

Milk should not be allowed to stand on the door step. Warmed by the morning sun, it will soon swarm with bacteria.

All organisms of this sort grow more slowly in the cold, though some are affected much less readily than others. Very cold milk does not sour, as the souring bacteria in it grow hardly at all, but after about two weeks it turns bitter, as a result of other bacteria that slowly multiply. Refrigeration delays spoilage of milk, meats and most other perishable foods. It is needed more for cold storage products than for fresh, as these furnish a better medium for bacterial growth and therefore spoil faster.

Cooling to any degree below summer heat tends to check microbic growth. Some organisms cannot grow at all, if the cold is fairly intense, and the rest grow but slowly. Few bacteria infective for man continue to multiply at temperatures below 50 F., and at 45 F. none. Germs of the common diarrheal form of food poisoning grow to some extent at 50 degrees but not at 45 degrees.

Box at 40 F. Is Ideal

The temperature must be still lower to check greatly the growth of all organisms causing spoilage. Home refrigeration could not be made to stop spoilage entirely, as consumers do not want their foods frozen and even that would not prevent all microbic growth. An icebox is doing what is wanted if it remains between 45 F. and freezing. A 40 F. box is perhaps ideal.

Boxes in general use are rarely so cold. That would require better construction and closer attention than most of them get. A large compartment kept well stocked with ice is the first requisite. Absorption of the heat of the box into the melting ice surface is proportional to the size of that surface. The degree and constancy of the temperature should be gaged by thermometer, as well as its variation in different parts of the box. The entire box is rarely cold enough to keep milk at its best. The coldest part is ordinarily beside the ice, and next to this the bottom of the lower food compartment. Good insulation and tightly fitting doors are needed to keep out the heat of the room, especially when the room is warmed by the kitchen stove.

Icebox construction should provide for good ventilation. Currents of air carry the heat from foods to melting ice and tend to dry overmoist foods. Meats and poultry are best kept in the main air current. As the bacteria of spoilage enter most largely with external soiling, begin their growth in the surface, and grow best in tissue partially dissolved by moisture, the surface of foods should be kept as clean and dry as possible. The extension of growth inward from the surface and the resultant spoilage are thus checked somewhat, though chief dependence must rest always on the coldness.

Too Great Economy Is Poor Economy

Refrigeration permits foods to be prepared in more economical quantities. Economy rather than hygiene instituted the practice. This motive may reach such extreme as to defeat its ends, however. The more poorly constructed boxes are cheaper, but they do not keep out enough of the heat of the room. Heat will not be absorbed adequately if only enough ice is bought to have a small chunk last until next morning. Milk warmed by the early morning sun on the porch is only slowly brought back to a chill in a poorly cooled box. Meantime bacterial growth gets a good start. Too much cutting of costs defeats effective refrigeration.

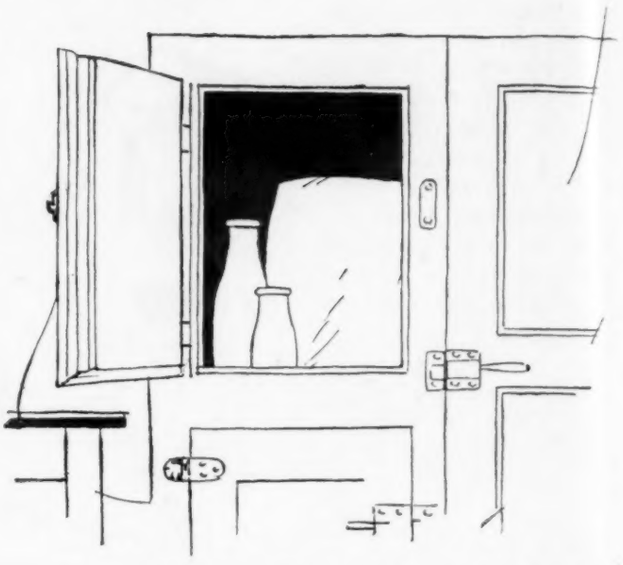
Electric cooling does away with any tendency to overeconomize. When a few hundred dollars go into a refrigerating machine, the effect is not sacrificed to save a few additional dollars on the box, and the maintenance cost is fixed automatically and not cut down at will. Electric refrigeration does away with muddy pools left on the floor by ice men, for instance. The ice man's great argument against electric refrigeration is its cost. Maintenance costs are not exorbitant; there is something for current and

a little for occasional oiling and perhaps for flowing water. The first cost and sometimes local service difficulties are the chief drawbacks.

The principle of electric refrigeration in the home is that utilized for years in the manufacture of artificial ice. In the change of a liquid into gas, heat is absorbed; just as in the change of a solid into liquid. Various liquids pass into gaseous form readily enough for the purpose, notably ammonia, sulphur dioxide, ethyl chloride and methyl chloride. More apparatus is required than in the icebox, for the melting solid needs only pans and drain as a container and is cheap enough to be thrown away when used, but the vaporizing liquid requires a closed system of pipes to contain it and is too expensive to discard.

In the cooling chamber are coils of pipe in which the liquid becomes gas, absorbing the heat of the box and expanding to many times the former volume. Then as the gas passes on from these coils and is compressed mechanically into small volume again, this heat is so greatly intensified that it goes over into cooler currents of air or water about the container. Thereupon the gas recondenses into liquid, which again enters the expansion coils. Thus the vaporizing material absorbs heat from the foods and gives it up to the currents of air or water. The mechanism must provide for circulation of this material and at the various stages for its compression, condensation, and valve-controlled flow into the cooling coils for expansion. The temperature in the box stays below the degree to which it is regulated, for a higher temperature throws an electric switch to start the machine.

Either the electrically cooled or the ice-filled box affords effective refrigeration if properly operated. Ice needed for direct cooling of foods or drink can be supplied by either, the electric box freezing water in receptacles next to the expansion coils. Whichever is employed, one should remember that the real dangers of infection are due not to infective material in the ice but to poor cooling, particularly of milk. Effectiveness is reduced by shaving the costs; contamination then multiplies and leads to earlier spoiling and often to infection. The safety, keeping qualities and palatability of foods are in any case increased by cooling, but they are increased to a desirable point only if the temperature remains below 45 F. and if other details are attended to.



The coldest part of the ice box is beside the ice. That is the best place for the milk bottles.

A Child Is to Be Born

IV. Planning the Layette

By
G. F. EARNSHAW

No baby ever had too many diapers.

IN THE English language there was formerly no single word to designate the wearing apparel required by a bride, so one was borrowed from the French, trousseau. Later, when the bride became a mother, and there was no word to indicate the complete outfit of clothing required by a new-born baby, France again supplied the single word layette. This word is now a part of our language.

By a layette is meant those articles of clothing that are made or purchased before the baby comes and that are designed to serve as wearing apparel during the first six months.

The Abdominal Binder

The first garment placed on a new-born baby is the abdominal binder. It is designed to hold the navel dressing in place and is worn only for the first few weeks until the navel is completely healed. Three or four binders are sufficient, just enough so that there will always be a clean one to put on after the baby has had his morning bath.

Abdominal binders are sometimes made of flannel; others recommend the knit binder which, being more elastic than flannel, more readily adjusts itself to the little abdomen. A flannel binder placed on a baby before feeding will be uncomfortably tight after feeding, or if adjusted to the full stomach will be too loose a few hours later. A knit fabric, on the other hand, expands and contracts with the abdomen. The binder should be long enough to go twice round the abdomen, as, in addition to holding the navel dressing in place, it serves to support the back and to give additional protection against temperature changes that might result in chilling the little body.

The abdominal band.

Knit binders can be purchased in three grades, all cotton, cotton and wool, and silk and wool. Cotton binders are the cheapest, but, it is asserted, do not afford as much protection against temperature changes as a binder containing an admixture of fine wool. The cotton and wool binder is the one generally used, and for all practical purposes it is good enough for any baby, but when the circumstances of the family permit, the more expensive silk and wool binder finds a place in the layette.

The Teething Band

When the abdominal binder is no longer required its place is taken by the teething band, which is a sleeveless knit undershirt supported by two shoulder straps. Three or four of these should be provided in every layette.

The garment should be so made that the shoulder straps fit close to the neck, for if they slip over on the points of the shoulder they will not only cause discomfort but will tend to pull the shoulders down; this should be avoided, for while the bones are soft even a slight weight constantly applied will draw them out of their normal position. This is why care should be taken to see that the shoulder straps fit close to the neck, where the bone structure, front and back, affords a firmer support than is found at the points of the shoulders.

The Vest, or Shirt

The vest, or shirt, is a double-breasted garment with sleeves and is worn over the teething band in cold weather. In the summer time or

The vest, or shirt.

in warm climates it may be dispensed with, and only the teething band worn as an undergarment. In the greater part of the United States and in Canada, during six or eight months in the year, the vest is a necessary garment. Three or four are usually purchased for the layette.

Like the teething band, the vest should fit close to the neck. The front portion should be made so that there is a double thickness of knit fabric over the chest and abdomen. Two light layers of fabric provide more protection than one heavy layer, owing to the air imprisoned between the two, and are more comfortable than a heavy garment that hampers the movements of the active little body.

If mothers would remember that a small baby's only exercise consists in kicking his legs and stretching his arms, they would be more careful in choosing garments that do not restrict the movements of the limbs. Fretfulness in babies is usually an indication that they are uncomfortable. A healthy baby that frets can nearly always be restored to good humor by giving him an opportunity to move his limbs freely. The old idea that babies should be bundled up in a multitude of tightly fitting garments is now known to be wrong. No more clothing should be used than is absolutely necessary to keep the body comfortably warm, and even these should be so designed that movement is restricted as little as possible.

The Gertrude

The gertrude is the invention of a physician and is named after his own little girl. It is a knit petticoat, long in the first sizes, but may be shortened by taking tucks in it when baby dons short dresses. It takes the place of the flannel petticoat formerly worn and is now generally preferred, being less expensive than a good petticoat of embroidered flannel and easier to launder.

One of the mother's problems is to keep the baby covered at night. The nightie should be so designed that ample protection is afforded, even if the bed clothing should be displaced.

The gertrude is an invention of a physician.

The approved form of night dress for babies is in reality a sleeping bag, long enough to come well below the feet and wide enough so that the baby can kick to his heart's content. Draw strings in the hem of the garment enable it to be closed at the bottom, and similar drawstrings are inserted in the sleeves, which are made long enough to cover the hands. By closing the sleeves at night thumb-sucking is prevented, which, if permitted, frequently results in malformation of the mouth. All danger of infection of the eyes by rubbing them with the fingers is also prevented.

The nightie is easy to launder, and is frequently used as a day garment as long as baby remains in the nursery. When visitors call, only a moment is required to slip off the nightie and replace it with an embroidered dress. Since babies spend the greater part of their time in sleep during the first six months of life, several nighties should be included in every layette.

Baby Hose

New-born babies do not need shoes; these can be purchased later. But several pairs of hose should be included in the layette. Plain white woolen hose are best.

Until recently, infants' hose have been made like other hosiery, but now something new is obtainable. It is the invention of a mother of seven children. This observing woman noticed that the back part of her baby's stockings bunched uncomfortably under the bend of the knee. One day she took a pair of scissors and snipped away the bunchy back portion, leaving a long tab in front for fastening the stocking to the undergarments. This was a decided improvement on the old style hose, and in this new form baby hosiery is now manufactured.

For a baby born in any of the summer months, light weight garments should be selected; the heavier weight garments should be chosen for a winter baby. In the colder climates the all cotton garment, which is widely used in the South, is not so suitable as a garment containing some wool. Many physicians say that during the first few months of life all babies should have the abdomen protected by wool, for any sudden change in temperature is liable to chill the little body if the garment worn next the skin lacks the heat retaining qualities of wool.

The skin of some babies is irritated by wool on the chest, particularly in warm weather, and to avoid this, while retaining the protection afforded by

wool over the abdomen, baby shirts are now made with the upper portion of cotton and the lower portion of wool and cotton, the two fabrics being joined in the knitting without a seam.

In selecting the garments to be worn next the baby's skin, the mother should be sure that the seams are on the outside, not the inside. She should not sacrifice comfort for appearance. Garments worn next the skin should be seamless if possible, and when seams are necessary they should always be on the outside so as not to irritate the tender little body.

Diapers

No baby ever had too many diapers. Four dozen are not too many to provide for the layette. Of these, two dozen should be 18 by 36 inches and two dozen 22 by 44 inches, as the baby will soon outgrow the smaller size.

If only a small supply of diapers is provided, constant washing is necessary, and there is danger that the diaper used will not be thoroughly dry. Probably more colds in babies are due to damp diapers than to any other cause. Chafing is often caused by using a second time without washing it a diaper that has been wet, but not soiled. No diaper, however clean it may appear, should be used a second time without washing. One should have plenty of diapers so that there may always be one that is clean and dry.

The cotton cloth known as birdseye is generally used for diapers, a purpose for which it is admirably suited being both light in weight and absorbent.

In addition to the diapers, it is well to have a plentiful supply of squares of cotton or linen, which may be made by cutting up old sheets or pillow cases. These pieces of cloth should be about 10 inches square, and one should be placed in the center of the diaper before putting the diaper on the baby. This will minimize the labor of keeping the diapers clean for the square of cloth will protect the diaper to a great extent and when soiled may be thrown away.

An ingenious device for keeping the diaper snugly in place has been made. Diapers should not be fastened so tightly as to cause discomfort, yet if loosely fastened they are sure to slip down over the baby's legs. To prevent this is the purpose of the diaper supporter, or baby suspender, which is a knit band that slips over the baby's head, the two lower ends providing a support for the diaper at front and back.

The outer garments provided for the layette may be many or few, depending on the amount of money available. For the new-born baby little is required other than the garments and the diapers already described and a few little slips, the simpler the better. Yet no mother is satisfied unless she provides a number of "company" dresses for her little one. These may range all the way from simple little nainsook slips to an elaborate christening dress. There is also the outdoor apparel to be considered, such as the baby bunting, bootees and carriage robe. In addition to this there is nursery equipment to be provided.

Baby's nightie.

Perhaps the best way to visualize the complete outfit for an expected baby is to list all of the things it is desirable to provide, marking with an asterisk those that should surely be on hand when the baby arrives and leaving unmarked articles that can be purchased or made later, or that it is possible to get along without. Such a list is appended.

SHOPPING LIST FOR EXPECTANT MOTHERS

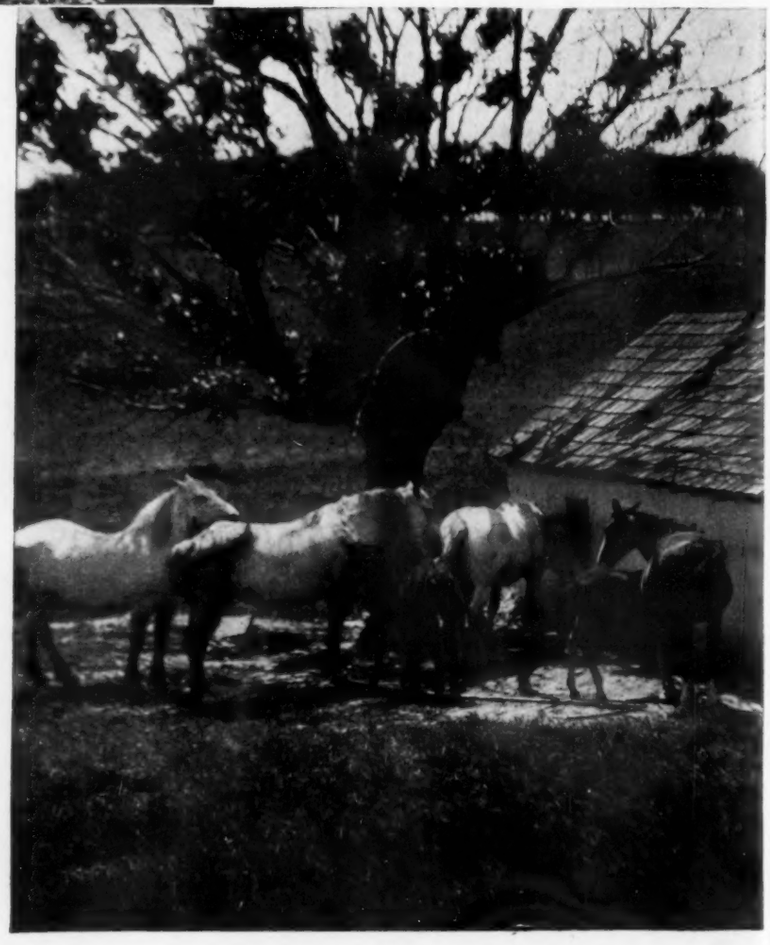
(Articles marked with an asterisk (*) should be on hand when baby comes. Other articles may be purchased later. Quantities stated are the minimum; more would be desirable.)

* 3 abdominal binders.
3 teething bands.
* 3 vests, or shirts.
3 gertrudes.
* 3 nighties.
* 3 pairs hose.
2 pairs bootees.
1 pair shoes.
*24 diapers.
* 1 nainsook skirt.
* 4 plain slips.
2 fancy dresses.
* 2 cashmere or crocheted wrappers.
2 short jackets.
1 baby bunting or other outdoor garment.
1 baby carriage.
1 carriage robe, or blanket.
1 hot water bag.
* 1 bassinet (and later, a crib).
* 2 pairs of sheets.
* 1 rubber sheet, 36x36 inches.
* 2 pairs of crib blankets.
* 1 crib pillow.
* 2 pairs pillow cases.
* 3 quilted crib pads.
* 1 toilet basket containing soap, talcum powder, vaseline and other toilet requisites.
* 4 wash cloths.
* 4 baby towels.
1 bath apron for mother.
1 chiffonier (or hamper) for baby's clothes.
Several drying forms for underwear and hose.

When Nature Beckons

City Dwellers Respond to Annual Summons of Woods, Stream and Farm

Photos by H. Armstrong Roberts



Preaching and Teaching the Gospel of Right Living Habits

A Modern Medicine Man

By J. CLARENCE FUNK

THE old fashioned medicine man with his raucous voice, sombrero, long hair, raised platform, negro banjoist and rattlesnake skins, selling to the country communities a bit of diversion and harmless oil, is now almost historical. Time changes everything and eliminates much.

Today, that cunning trader in gullibility is having a trying time to make ends meet. Things move too fast for him. His shabby show is forced to compete with the automobile, which brings the movies and other attractions within a few minutes of village and city people alike.

However, a quite different and most modern medicine man is now abroad, stalking the highways and byways of a number of states in the Union. This medicine man, like the old one, sings the same siren tune—the song that reaches every human heart. It is the song that sent Ponce de Leon upon his quest; it is the song of today's scientific researchers, and it is also the song of the foundations backed by their many millions of philanthropic dollars. It is simply the song of health. So of course the people listen, listen eagerly, listen wonderingly, listen enthusiastically. It is fundamental.

The strange thing about the amazing success of this new-fangled tramp lies in its being utterly commonplace. It has no patent medicines to sell or nostrums to offer. And, most assuredly, it is not after the people's money. It possesses no trappings. It carries no scenery. It is simplicity itself.

It is merely a piece of motorized evangelism. It is a missionary, rubberized. In short, it is a health car or traveling clinic, preaching and teaching the gospel of right living habits, disease prevention and physical conservation.

It is to remote localities—the mining town, the mountain fastness, the isolated valley, the distant agricultural community—that the mobile clinic and its staff, consisting of physicians, dental hygienists and nurses, wend their evangelistic way.

Said the directing physician of one of these unique organizations: "The most important part of the nation's population is the children; they represent its hope. Consequently the babies and young children are our chiefest concern. Save the babies and we save all."

The wisdom of the physician's statement is fortified by the fact that the national mortality rate for children under 6 years of age is rather disheartening. However, a few years ago it was much greater, indicating happily that in the meantime science has not been asleep.

A roadside clinic is in full operation wherever the health car stops. Mighty aches from faulty tonsils grow is one of the maxims of the motor missionaries of health.

Thomas, the first patient of the morning, is a boy 3 feet, 1 inch tall. Thomas will be given a complete health examination.

Again, it is authoritatively estimated that more than one third of the children in the United States are underweight or malnourished. This is one of the basic reasons for such a peripatetic unit's existence.

It must be understood that the consultation cars are not dispensaries for treatment of any sort. Health departments and other organizations sponsoring them thoroughly realize that the curing of defects belongs to private practice alone. However, they do educate rural populations to visit even the far removed physician, while the village and smaller community dwellers are inspired to take the baby or child, no matter how well he appears to be, to their regular physician at definite intervals.

The modern note in medicine is thus emphatically achieved. And the response, the doctors report, is most gratifying. In earlier days the physician was sought only in time of positive illness. Headaches, colds, coughs and minor pains were considered as of no professional concern. And as for visiting a doctor's office when apparently enjoying excellent health—what for?

But conditions are changing. In this, the health cars are assisting in no small way. They eloquently preach that mighty aches from faulty tonsils grow; that the listless, tired child with drooping posture invites the tuberculosis germ to come in and set up housekeeping; that wrong food and little sleep may deal the little frame a body blow; and that serious conditions may be germinating in seemingly well bodies, discoverable only by the trained eye, ear and finger tips of the skilled physician.

What the Roadside Clinics Discover

"A life worth living is a life worth saving" is therefore the motto of the roadside clinics. So it comes to pass that thousands of American babies are getting their chance to be examined and, if necessary, treated by the physician.

"These medical excursions," said one of the physicians attached to a most active unit, "resulted in the discovery that of the children examined, from 18 to 33 per cent were undernourished, 30 per cent had enlarged tonsils, 7 per cent were mouth breathers, and 7 per cent had defective vision; not to mention the incidence of rickets and suspicious hearts. Moreover, many parents proudly brought these children to the car thinking they were well!"

Medicine's Most Forward Step

Taking preventive health direct to the people is medicine's most forward step. Offering it to the youngsters in the form of a consultation car is an efficient and most alluring method.

The U. S. Public Health Service and health departments have successfully, and, in most instances, heroically, attacked the epidemic diseases. Typhoid fever, with water purification and modern sewage disposal, is no longer common; smallpox, through effective vaccination, is controlled; yellow fever is practically negligible. So the story runs. Official medicine has done a miraculous piece of official prevention. But individual health needs individual attention. Education is solving the problem.

The traveling health units, penetrating the public consciousness through their irresistible appeal, save babies, educate adults and spell the future well-being of citizens in the attractive and capital letters of GOOD HEALTH AND LONG LIFE FOR ALL.

Some Interesting Facts about

THE NAILS

Their Appearance Is One of the Best Indications of a Person's Health, Habits and Personality

By
FRANK W. CREGOR
and
FRANK M. GASTINEAU

ONE does not need to be a clairvoyant to read physical and financial fortune in hands. The condition of the nails is a good index of one's general health, habits and personality.

When a leisure class is developed in any civilization, one of the first requisites is better care of the nails. The disappearance of grime from under the nails definitely places the person in the more particular class of people. In some civilizations of the past, great care of the nails and elaborate toilets for the hands have been evolved. In the recent past some of the oriental people gave marked attention to the nails and permitted them to grow to great lengths.

The rapid increase of beauty experts and manicurists gives evidence that the American public is vitally interested in personal care of their nails.

The nails are specialized skin tissue placed at the ends of the fingers and toes for protection. In lower forms of animals the nail is used as a means of offense and defense. Happily this function is rarely used by human beings. The skin below the root of the nail is called the matrix. In most persons a half-moon shaped white area is visible on the plate of the nail near the root. This is known as the lunula.

White spots of variable size are frequently seen in the nails of young people and are due to fine bubbles of air that have been infiltrated between the cells of the nail as a result of injury. A person's general health influences the growth of the nails. Finger nails usually grow about 4 mm. (⅙ inch) a month and the toe nails about one fourth of that rate.

The study of the finger nail is interesting in character analysis. The broken off nail in the nervous person, due to biting and gnawing, is a definite advertising sign of his make-up. The

carefully manicured nail is indicative of social standing and of a certain amount of leisure. The highly polished nail with its concave, worn edge is frequently seen in one who has been suffering with some chronic, itchy skin disease.

The nails take on marked changes with old age. Elderly persons frequently have nails that are discolored and twisted like a ram's horn. This is because they cannot or will not give them proper attention. Congenital malformation of nails, such as their entire absence or an oversupply, are sometimes encountered. However, multiple or accessory nails may not be recognizable until several years after birth and are often associated with other skin conditions.

Environment has a marked effect on the appearance of the nails. Manual labor and stains resulting from dyes, drugs and tobacco modify the appearance of the nails. Occasionally the nails themselves, but more frequently the nail bed or matrix, become infected. This is usually due to common bacteria, and the duration of the infection is not long. Occasionally the infection is caused by the ringworm fungus. This condition is slow to respond to medication and causes marked deformity in the nails. If permanent damage to the nail bed is the result of the infectious process, faulty nutrition of the nail takes place; if temporary damage, ridges, pits and irregularities of the surface are the result.

Ill Health Brings Changes in Nails

Marked changes take place in the nails as in other parts of the body, as a result of disease. There may be alteration in color, shape and texture. There may be an overgrowth, as is sometimes seen with giantism, or atrophy, as seen in some severe general disturbances. Eczema, dermatitis and psoriasis involving the hands and feet may cause marked changes in the nail resulting in atrophy, pits and furrows. These will persist as evidence of the skin disease long after the skin itself has returned to normal. When casts or splints are quite firmly applied to broken bones, changes take place in the nails of the affected extremity as a result of pressure.

Practically all severe fevers, such as typhoid, pneumonia and influenza, and chronic ailments like diabetes leave their mark in the nails. This is evidenced by a transverse groove or ridge usually seen most plainly on the thumb and index finger nails.

It is a common observation that the patient suffering with chronic chest disorders, such as tuberculosis, empyema or valvular heart disease, has peculiar finger nails. The ends of the fingers are clubbed; the nail beds are raised, and the nails curved. There is a marked improvement in the appearance of the nails when improvement takes place in the chest. The presence of capillary pulse, seen by making moderate pressure on the nail edge, is one sign of a serious heart lesion.

In the condition known as alopecia areata, in which there is a partial or total loss of hair, marked changes in the nails may be observed. In severe cases there may be a shedding of the nails. This phenomenon is also seen in diabetes and typhoid.

Striated or total whitening of the nails may take place after severe neuritis. Probably the worst nails are those of persons with leprosy. Syphilis, too, has a marked effect on the nails, sometimes causing a nonpainful felon. The nails may be cracked or brittle at their free end or detached from below upward. It is associated with other signs of the disease. The appearance of the nails may be markedly influenced by drugs. Arsenic causes discoloration and brittle nails; chloral hydrate in addicts causes ulcers at the nail bed. X-rays may cause marked destruction.

A physician should not diagnose a general disease from nail changes alone, as many factors may cause the same type of lesion. In order to support his diagnosis there must be evidence elsewhere, except in local infections and injuries. The appearance of the nails may be a clue to some basic disorder and is just another link in the chain when making a diagnosis.

Hangnails may be prevented by careful, regular manicuring. One should be particular to see that the overhanging skin is gently pushed back by an orange stick. There is marked danger of infection from the cuticle knife, and many infections result from the injudicious use of this instrument.

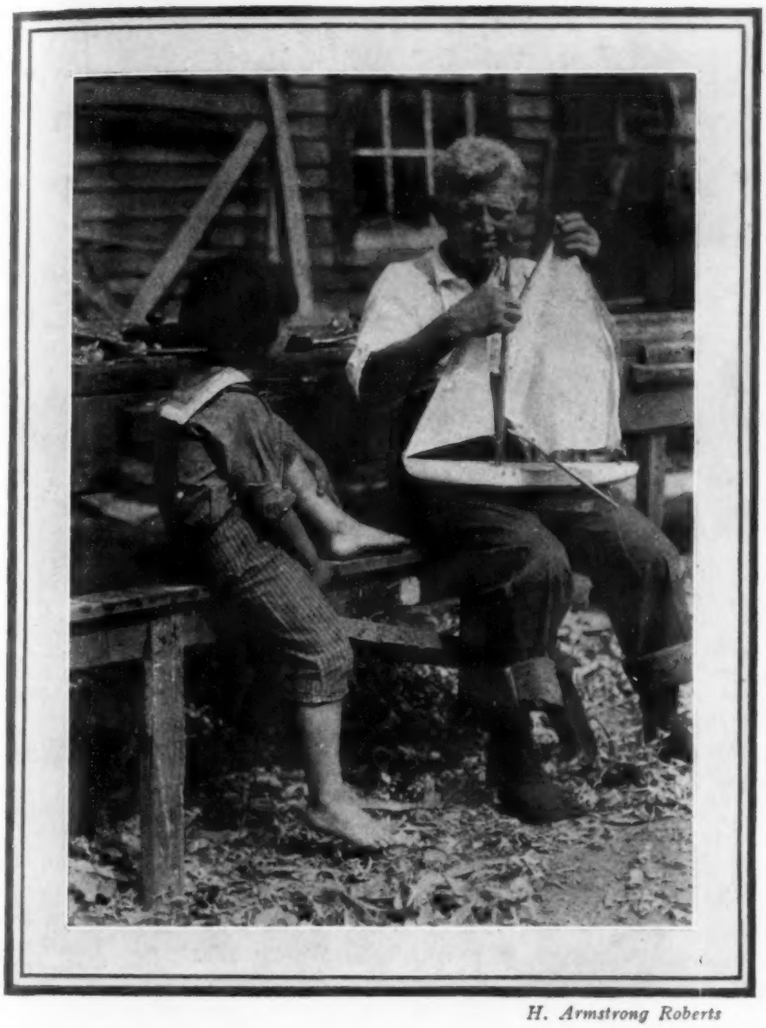
The beauty expert should be careful to see that her instruments are clean, for even syphilis is occasionally passed on by a careless operator.

Care of Toe Nails

While the cosmetic appearance of the toe nails is of importance only to a limited number, like barefoot dancers and bathing beach promenaders, reasonable care is required of all.

Neglect and improper trimming are factors in precipitating ingrown toe nails. This is notably true in the case of the great toe. In the early stages ingrown toe nails can be prevented by trimming the nails straight across. If the condition is advanced, a local operation with partial removal of the nail is required.

Nails are resistive to treatment, because local remedies have difficulty in penetrating to the source of the trouble. When disturbances in the nails are merely a reflection of some systemic disease, the outlook will depend more on the general condition than on local remedies. Because of the slow growth of the nails, improvement is usually slow. As long as the root or matrix has not been destroyed by local or systemic conditions, the nail should in time assume its normal appearance.



H. Armstrong Roberts

Diet *for the Aged*

Less Food Is Required as the Person Becomes Less Energetic

By ESTHER NELSON

THE diet used by any normal adult should contain: (1) sufficient energy for the daily needs, only; (2) just enough protein to keep the body in repair; (3) enough fresh vegetables, fruit and milk to provide for the body regulators, i. e., minerals and vitamins; and (4) a moderate amount of fluids.

Overweight Is Dangerous to Aged

The only way in which a diet for those advanced in years differs from a diet for any other adult is in amount. As one passes middle age, the energy requirements become less and less as activity decreases. In many persons the appetite adjusts itself; but in others it keeps up to its usual level with the result that there is an increase in weight. This is an unfortunate occurrence in that it throws extra work on the heart. Markedly excess weight shortens life considerably. There are few aged persons that are obese; the reason being that the obese seldom live to be old.

A person beyond 65 years of age weighing around 150 or 160 pounds will be amply nourished if the day's menu contains the following: 2 servings of vegetables, 2 servings of fruit, 1 moderate serving of meat, 2 glasses of milk, ½ glass of cream, 1 egg, 4 to 6 slices of bread, 2 to 3 level tablespoons of butter, 2 strips of bacon, and 2 to 3 teaspoons of sugar.

Suggested Menu for a Day

The following distribution by meals is suggested.:

Breakfast.—Fruit; egg, 1; bacon, 2 strips; cream, 2 tablespoons; toast, 2 slices; butter, 2 pats; coffee (if it does not make the person nervous); sugar, 1 teaspoon.

Lunch.—Milk, 1 glass; bread, 2 slices; butter, 2 pats; vegetable, 1 serving; fruit; cream, ¼ cup.

Dinner.—Meat, 1 moderate serving; vegetable, 1 serving; bread, 2 slices; butter, 2 pats; milk, 1 glass, or custard; coffee; cream, 2 tablespoons; sugar, 1 teaspoon.

A serving of potatoes or cereal may be substituted for one slice of bread, if desired.

There are individual variations in the amounts of food necessary for different persons of the same size and age. The only way to be sure as to whether or not the daily energy requirements are being met is to be weighed weekly, being careful to allow accurately for variations in the amount of clothes worn at the time of weighing.

The Border Line

between

Mental Health *and* Mental Illness

By
L. D. HUBBARD

No one is more constantly unhappy or more distressing to associate with than the person who senses a slight in every word and a sneer in every glance.

TO MOST people the nature of a mental illness is shrouded in mystery and cloaked with horror. If one hears that an acquaintance has "gone crazy," the first question is apt to be "Is he violent?"

The idea of mental disorder is only too often associated with staring eyes, flailing arms and noisy gibberish. The mind's eye conjures up a picture of padded cells, clanking chains and barred windows. The bare thought that some one has "lost his mind" removes that person into a limbo cut off from sympathy because his friends have no means of understanding, though he may receive uncomprehending pity in plenty.

It is a fact, however, that many persons suffering from mental illness of varying degrees of severity pursue their accustomed tasks and mingle with their fellow men day by day, their true condition remaining undetected. Some of these persons are unaware that anything is wrong with them. Some realize only too well that something is upsetting their lives, destroying their sense of values and keeping them in a state of anxiety and distress, but have no clue as to where the difficulty lies or to whom to apply for help. Some suspect that the trouble is mental, but because of fear or shame are unwilling to consult a specialist in mental diseases.

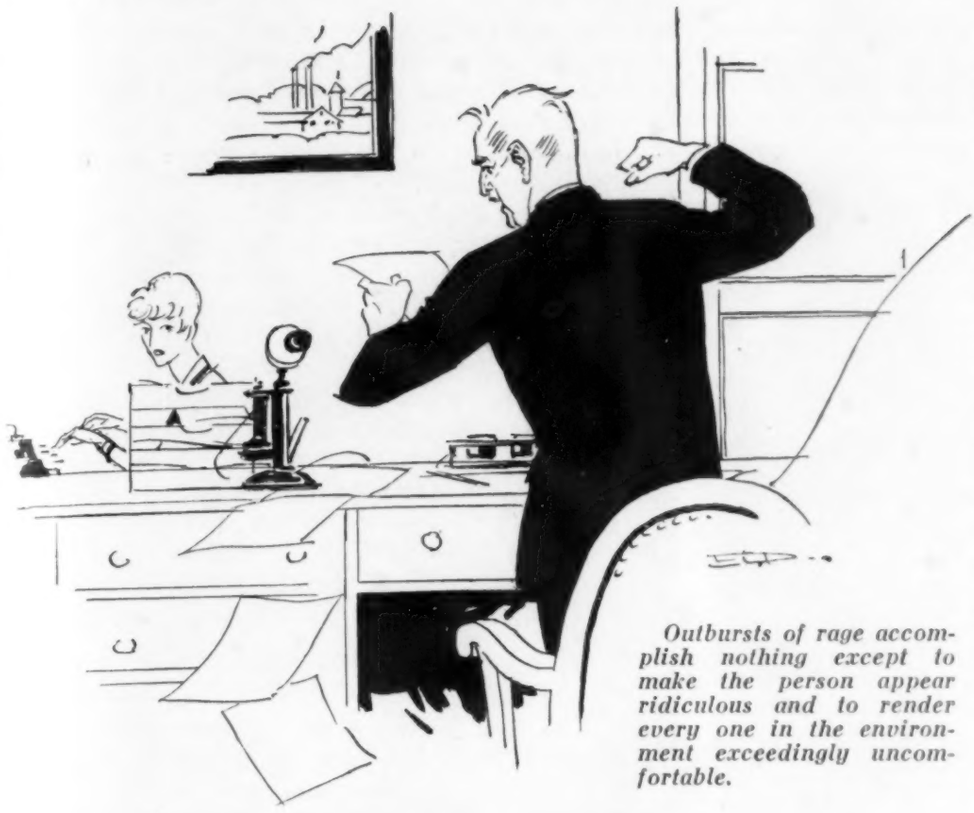
Some Are Ashamed of Mental Disorder

These last-mentioned persons are the victims of the old-fashioned and ignorant attitude toward mental illness that has come down from the Dark Ages. Such an attitude becomes increasingly rare with the spread of knowledge, but still only too often it does irreparable damage and works additional hardship on those who suffer from a disordered mind. The person who will publish broadcast all the data concerning a relative who is ill of typhoid or smallpox will stoop to petty deceits and trickery to conceal the fact that a relative has a mental disorder. He does this in the face of the fact that a trifling attention to vaccination or sanitation might have prevented the smallpox or the typhoid, whereas no one has as yet developed a specific preventive for mental illness.

The same reasons that deter a person from seeking help for himself operate to keep his associates from taking steps to help him. Too often his condition is cruelly misjudged; his friends call him impossible, say that he has poor judgment, that he loses his head, or even that he is hysterical, which may be true, although not often in the sense in which it is used. Little sympathy is accorded him, and he is said to be putting on, begging for sympathy, or just plain faking. None of these remarks, when they come back to the patient, tend to do him any good; on the contrary, they may aggravate his affliction.

Trouble Begins as an Exaggerated Trait

Many mental disorders are in the beginning only exaggerations of traits that are common in a greater or less degree to every one. Every one counts among his acquaintances some person of mercurial disposition who is now jolly, active, sociable, full of hope and ambition, and again quiet, downcast, gloomy and disheartened. Such a person often makes good in the world by virtue of the tremendous amount he accomplishes during the active periods, despite his comparative inefficiency during the intervals. So long as he gets along reasonably well in his niche in life, so long as he is able to control his excessive activity and direct it in



Outbursts of rage accomplish nothing except to make the person appear ridiculous and to render every one in the environment exceedingly uncomfortable.

economically useful channels, so long as his gloomy periods do not incapacitate him, he cannot be said to be mentally ill, although he may be a very uncomfortable person with whom to associate.

But when the activity of such a person becomes so great as to lead him into rash business ventures, a plurality of love affairs or a series of neighborhood quarrels, or when his gloom settles upon him so thickly that he stays at home from work, will not talk and meditates self-destruction, then he is in need of sympathetic help and understanding from a physician trained in the treatment of mental disorders. He needs that treatment quickly, in spite of the fact that he impresses his friends and relatives merely as a moody sort of person always getting into trouble one way or another and then going off by himself and sulking about it.

Absent-Mindedness Is Faint Danger Signal

The newspapers run ceaseless variations on the theme of the absent-minded professor, and absent-mindedness is at times so common to all that it can scarcely be considered as more than a faint danger signal. But failing to get off at one's station because of the depth of one's reverie is one thing, and failing to get out of the way of an automobile for the same reason is another thing altogether. Life requires a certain amount of direct attention, and when one is unable to accord it the minimum that is essential to safety, something ought to be done about it. It is no disgrace, on the contrary it is distinctly a sign of good sense, to take the problem to a psychiatrist. Almost every one has a pet fear, whether it be of high places, electric storms, open spaces, cats or what-not. As a rule this is only a sense of discomfort, easily controlled and causing no real distress. Thus far it does not constitute a symptom of a mental illness, or even a danger signal.

Suppose, however, that it amounts to a terror, a paralyzing, nauseating terror. Even so, it may not be incapacitating, for one may live in the densest part of the city to avoid the open spaces if that is the source of one's trouble, or one may rigidly avoid high places, or flee ignominiously from an approaching cat, still keeping one's secret inviolate and going about one's business with a wary eye cocked for the fear-producing object.

Persistent Fears Need Attention

Such a condition needs attention, for one cannot always evade the situation feared, and it is a serious drain on efficiency to keep the necessary careful watch on the environment and control of the emotions. In the case in which a person cannot ride in an elevator because of a fear of closed spaces, or walk across a deserted hotel lobby because of a fear of open spaces, or traverse the streets in the daytime for fear of seeing a cat, his plight is so serious that he may be driven to seek help, whereas the situation might never have become so distressing had he had treatment in the beginning.

Plenty of people are unfortunate enough to be the possessors of high tempers and may even be more or less secretly proud of the fact on the ground that they are high strung, whatever that may mean. These people are wont at intervals to upset their digestion, strain their hearts, exhaust their ductless glands, and otherwise disorganize their systems by outbursts of rage, which accomplish nothing except to make them appear ridiculous and to render every one in the environment exceedingly uncomfortable.

Much of this is, of course, a matter of early training. But when temper becomes truly ungovernable, it is a matter for the psychiatrist rather than for the disciplinarian. It is a tragic situation when a person so afflicted remains untreated until irreparable damage has been

done and he has to be punished by society for an act committed during an attack of mental disorder that was not recognized. Far better would be temporary segregation from society for treatment than permanent segregation for punishment.

Every community counts among its members some one who is inordinately sensitive. This trait is often spoken of with a sort of pride, as though it indicated some subtle superiority to the common herd of thick-skinned mortals. Why any one should be proud of being easily hurt is a mystery, but so it has been since the days of the mythical princess whose sleep was disturbed by the presence of a pea beneath her seven feather beds.

No one is more constantly unhappy or more distressing to associate with than the person who senses a slight in every word and a sneer in every glance. It is a tremendous drain on the supply of the milk of human kindness to keep such unfortunate people on a friendly footing with the world, and they are all too often shunned as touchy or accused of feeling that they are better than their associates. As a matter of fact, the reverse is usually true: they feel inferior to their associates and are consequently on the lookout for indications that others agree with them.

Supersensitive Are Hard to Help

Sometimes this belief is so distressing to these people that they cannot face it, and they begin a frantic search within themselves for some quality by means of which they may excel. If the search is successful, equilibrium may be regained, but if it is unsuccessful and they are driven to the expedient of manufacturing some superior ability with the aid of their imaginations, they are more than likely to come to grief. These thin-skinned, chip-on-the-shoulder persons are actually suffering from mental illness when they begin to misinterpret what is said to them and to read a reference to themselves in every passing glance and half-heard conversation. They need treatment, but they are difficult indeed to help for they trust no one and believe in nothing. Nevertheless they should not be allowed to become further and further alienated from society without some attempt being made to reestablish them on a more healthful basis.

A great deal could be said about children, the incorrigibles, the bad children that fill the juvenile courts and the reformatories. Fortunately, more attention is being paid to the mental health of these delinquents all the time, and they are beginning to receive scientific care and attention; but they used to get nothing more than the retribution meted out to them by an outraged society. The adolescent, too, is at last receiving long-needed understanding. The day-dreaming of that dangerous period is normal, but should it absorb the attention of the person to such an extent that it interferes with his contact with reality, it is a danger signal that should not be ignored.

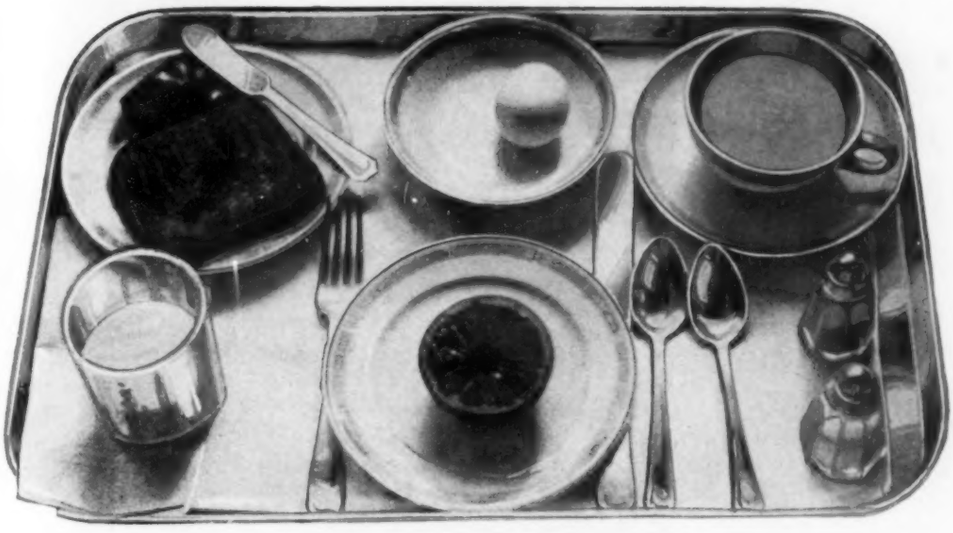
Loss of Sense of Values Is Dangerous

The line between the mentally ill and the mentally well is a hazy and indistinct one, for who can define the limits of normality? Those who pass as mentally sound have within them traits that, exaggerated sufficiently, would necessitate their temporary or perhaps permanent segregation from society. When one or more of these characteristics assumes such large proportions in their outlook on life that everything is thrown out of focus and they lose their sense of values—that is the border line. They may still make a passable showing in their business, social and domestic life, but efficiency suffers, they suffer, the environment suffers, and it is time to consult a psychiatrist.

Nothing is gained and a great deal may be lost by delaying action until the personality is so distorted that adaptation to life in the community is no longer possible. Help at the border line would save many persons untold suffering and perhaps years of care in a mental hospital.

Dieting to Reduce—A Day's Menu

By Elmer L. Severinghaus

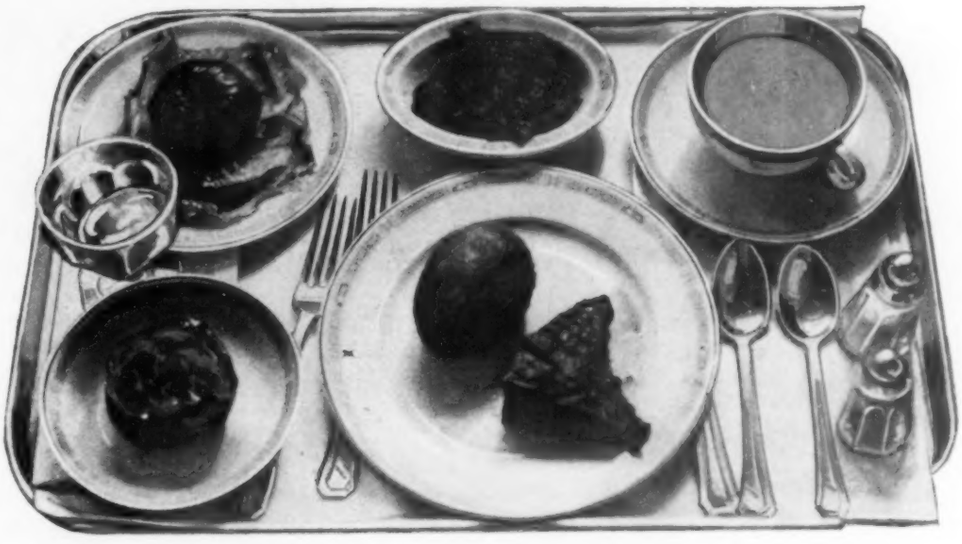


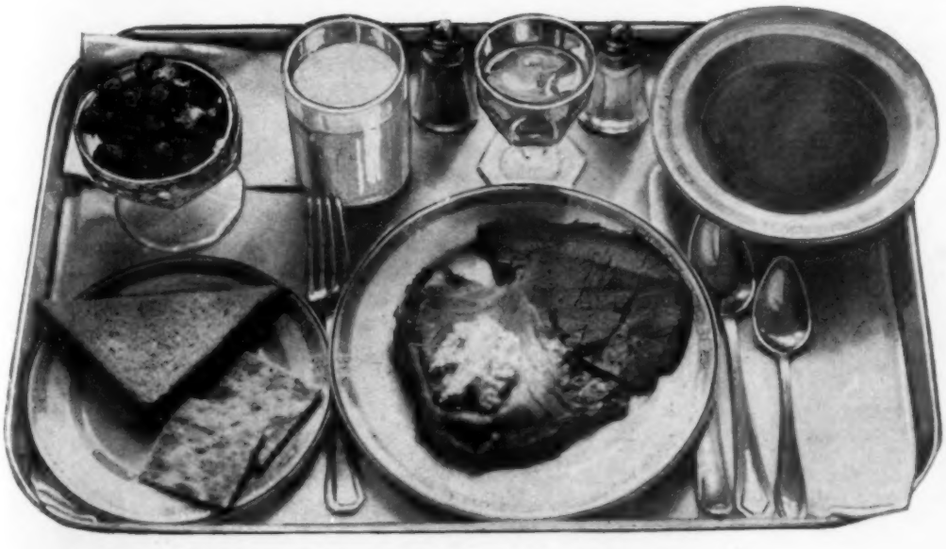
BREAKFAST
(304 Calories)

One-half orange; one slice toast; one tablespoon jelly; one egg; one-half glass skimmed milk; coffee.

DINNER
(545 Calories)

Three ounces steak; one medium sized baked potato; as much lettuce as is desired; mineral oil dressing; one portion spinach; one medium sized baked apple; coffee. Tea may be substituted for coffee. Coffee may be used as often as is desired.





SUPPER
(365 Calories)

Consommé; two crackers; two ounces cold roast veal; lettuce; one ounce cottage cheese; mineral oil dressing; one-half slice bread; one glass milk; three ounces strawberries; one teaspoon sugar. As much lettuce may be used as is desired.

[These suggestions for a 1,200 calory reducing diet, to be carried out only on the advice of a physician, were first published in the *Wisconsin Medical Journal*.]

done and he has to be punished by society for an act committed during an attack of mental disorder that was not recognized. Far better would be temporary segregation from society for treatment than permanent segregation for punishment.

Every community counts among its members some one who is inordinately sensitive. This trait is often spoken of with a sort of pride, as though it indicated some subtle superiority to the common herd of thick-skinned mortals. Why any one should be proud of being easily hurt is a mystery, but so it has been since the days of the mythical princess whose sleep was disturbed by the presence of a pea beneath her seven feather beds.

No one is more constantly unhappy or more distressing to associate with than the person who senses a slight in every word and a sneer in every glance. It is a tremendous drain on the supply of the milk of human kindness to keep such unfortunate people on a friendly footing with the world, and they are all too often shunned as touchy or accused of feeling that they are better than their associates. As a matter of fact, the reverse is usually true: they feel inferior to their associates and are consequently on the lookout for indications that others agree with them.

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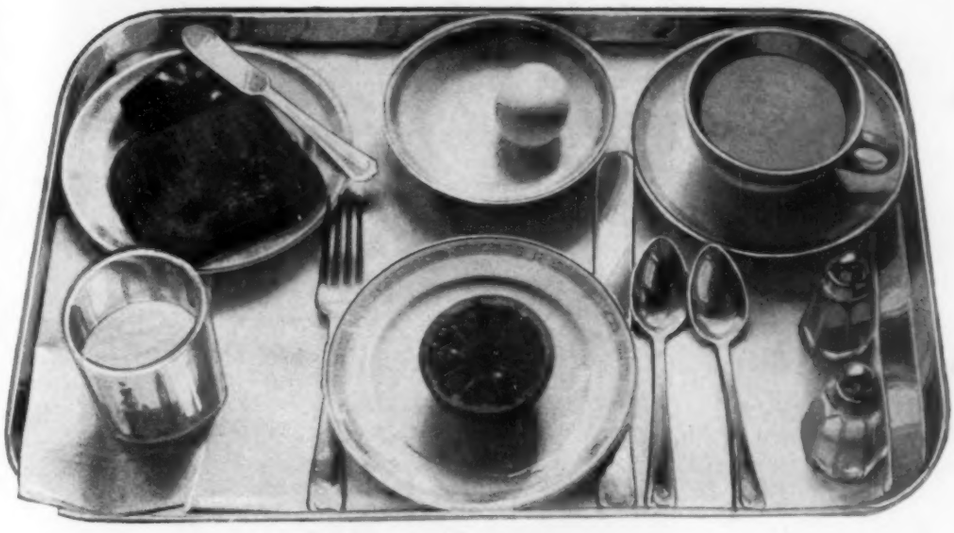

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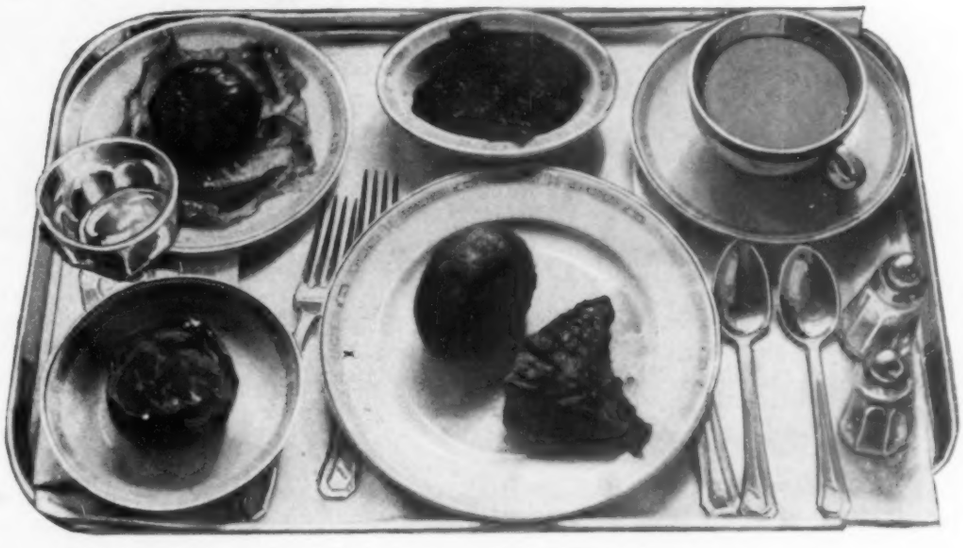

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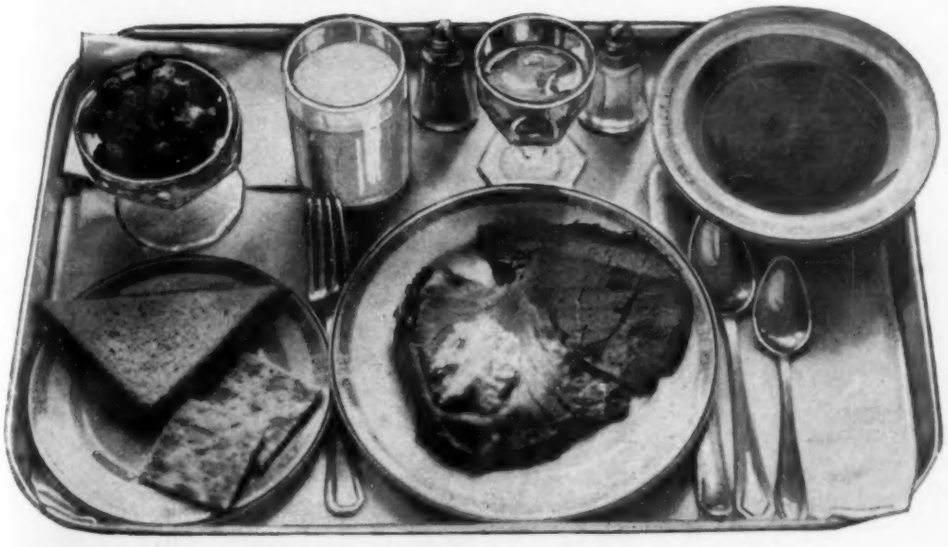

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ANESTHESIA

By EMIL MAYER

James T. Ballard

The first demonstration of the use of a general anesthetic was made by the dentist Dr. W. T. G. Morton, at Massachusetts General Hospital in 1846.

OF ALL the contributions to medicine during the past century, and there are many, none is quite so great a boon to suffering humanity as the practical application of anesthesia, that state of local or general insensibility produced by the inhalation or application of an anesthetic. It is quite impossible to realize now how men existed so long and suffered so terribly without this relief from pain.

The successful public administration of ether by Dr. W. T. G. Morton, a dentist of Boston, in 1846, was the beginning. He first used it to pull teeth; later he administered it for surgical operations. The news of his success reached London in December, 1846. Within two days it was successfully used for tooth extraction, and two days after that, Dr. Robert Liston operated on patients anesthetized by ether.

Sir James Simpson of Edinburgh also began to use ether. Then in November, 1847, he announced his discovery of the anesthetic properties of chloroform, a trial of which had been suggested to him by Waldie, a chemist of Liverpool, who was interested in the subject.

The idea of eliminating pain at the time of operation was not new, for there is ample evidence of the employment of medicaments for this purpose as far back as the third century, when, as an old Chinese manuscript is said to state, a physician named Hoa-tho gave his patients a preparation of hemp, whereby they were rendered insensible during the performance of a surgical operation. There is also ample authority that nepenthe, poppy and hemp were extensively used in the Middle Ages, and Shakespeare makes frequent mention of stupefying drugs and their uses.

The provisional nature of the effect and its impermanence led surgeons to cease using drugs; consequently until the end of the eighteenth century operations were performed "by main strength." Under such conditions, without anesthetics and also without antiseptics; with insufficient practice, for everybody dreaded operations; and with the hardness of heart that was necessary to withstand the patient's cries, it is remarkable that the surgeon did so well or that the profession had any friends left.

One of the surgical procedures that has come down through the ages with great clearness was that of "cutting for the stone." This is mentioned in the Hippocratic oath, to which all physicians subscribe. Such an operator was a specialist, and with the prescience of possible failure he carried about with him a stone which could be shown to the patient as a reward for his suffering.

Samuel Pepys was a victim of this malady and, in 1658, two years before he began his diary, at the age of twenty-five, he underwent the operation. It was successful, and for the rest of his lifetime, March 26, the day of his operation, was celebrated by him and his friends in feasting and rejoicing.

The details of his operation are of much interest, and they are described with such vividness that one is able to compare the methods then in vogue with those of the present times.

Pepys' Account of Stone Cutter

On the eventful day the stone cutter arrived with a half dozen burly helpers, a heavy table and plenty of rope. With the patient securely trussed, each attendant holding some part of the victim, and with an extra one to sit on his chest, the operation went on amid the howls of the patient, while pallid little Mrs. Pepys, "poor wretch," in some nearby room suffered with him as she tried not to hear his entreaties.

On March 26, 1660, Pepys writes in his diary: "This day it is two years since it pleased God that I was cut for the stone at Mrs. Turner's in Salisbury Court, and did resolve while I live to keep it a festival, as I did the last year at my house and forever to have Mrs. Turner and her company with me." In 1664: "This, being my solemn feast for my cutting of the stone, it being now, blessed be God, this day six years since the time; and I bless God I do in all respects find myself free from that disease or any sign of it."

The next year he begins to have some doubt as to the cause of his continued well-being, for he writes in 1665: "Now I am at a loss to know whether it be my hare's foot which is my preservation, for I never had a fit of the colic since I wore it, or whether it be my taking a pill of turpentine every morning."

What a different picture is presented in the operation of the present day. Heroics are no longer required on the part of the patient or of the surgeon. Careful preparation is made, including abstinence from food of any kind for a reasonable length of time and the administration of morphine an hour or two before the anesthetic is to be given. The opiate does much to allay nervousness, and quiet confidence reigns instead. In the well appointed hospital, the patient, accompanied by his nurse, is wheeled to the anesthesia room where the surgeon is already waiting. With a smile and a word of cheer, the patient is introduced to the anesthetist, who is solely interested in inducing complete insensibility.

Fred L. Fales

Last month the statue of Long was reproduced in HYGEIA. *This is a statue of Morton, which stands in the Boston Public Gardens.*

The surgeons and attendants are clad in white. On a table glitter some workman-like instruments; there may be a tank or two. Presently a combination mask of metal and rubber is placed over the mouth and nose, and the patient breathes deeply. His nurse grasps his hand firmly to insure confidence, simultaneously feeling his pulse. After a few deep breaths are taken, there is a throbbing about the head and a sense of falling. Then there is

a gentle tap on the cheek, and the patient opens his eyes to find himself in bed with the surgeon telling him it is all over. The nurse gives him a congratulatory look and the "poor wretch," his wife, finds tears mingled with her smiles.

A comparison of these two methods, one crude and painful, the other refined and gentle, makes one realize the great boon that anesthesia is to suffering humanity.

The discovery of the anesthetic properties of nitrous oxide (laughing) gas antedates that of both ether and chloroform; for Sir Humphrey Davy announced the discovery of nitrous oxide gas in 1800.

Faraday was the first to show that the inhalation of sulphuric ether produced anesthesia. This was later shown by Godman, James Jackson, Wood and Bache, American physicians.

There was no practical use of any of these discoveries until Dr. Wells, a Connecticut dentist, in 1844, underwent a tooth extraction while under the influence of nitrous oxide gas. As a result of the failure of a demonstration in Boston, he abandoned the project of nitrous oxide anesthesia.

Two years later, Dr. W. T. G. Morton announced his success with ether. With the advent of chloroform, both drugs came into use, slowly at first, ether the more favored in this country, chloroform abroad, particularly in England.

Discovery of Local Anesthetics

In 1884, Dr. Karl Koller, then a physician in Vienna, announced that he had successfully produced anesthesia by dropping a solution of cocaine in the eye; he then operated without any pain to the patient, and without the loss of consciousness.

Cocaine was found to be useful not only for removing foreign bodies from the eye, but for other purposes. By application or injection it produced entire insensibility in the region so treated, and operations of all sorts were presently undertaken. Thus began the first successful use of local anesthesia.

This discovery revolutionized operative measures. There was no loss of consciousness, none of the unpleasant and frequently long-continued after effects of ether or chloroform, and the number of days in hospital was largely decreased. The economic value of time saved counted for much. The method of local anesthesia was applicable to all save the very young and to such timid souls as could not bear the thought of being in any degree a witness to an operation on themselves.

To the painlessness of the local anesthesia there was soon added an important ally, when, in 1886, it was discovered that a preparation of the dried extract of the glands situated over the kidneys of the sheep would so contract the blood vessels as to render the parts bloodless. Hence an operation could now be both painless and bloodless.

Procaine Safest of Local Anesthetics

The one preparation that is by far the safest of all local anesthetics now in use is that known as procaine. Millions of injections of procaine have been given in this country, and fatalities following its use are rare.

The use of local anesthetics, with a small amount of epinephrin to contract the blood vessels, was much increased and became of great value, especially in the World War. In a huge army the saving of days in hospital meant much. The new method was easy to employ, and often an operation was successfully performed that would otherwise have failed.

One typical case of tumor of the brain may be cited. Operation by way of the nose was attempted under general anesthesia. Three times it failed as the operator could not see his landmarks because of excessive hemorrhage. The fourth operation was undertaken under local anesthesia and was entirely successful. Thus local anesthesia has gained a firm foothold and has come into constant use.

Rocky Mountain Spotted Fever

A Remarkable American Malady and Its Insect Vector

By R. R. SPENCER

NO LESS than twenty-two human infections are known to be transmitted by bites of insects. Three of these are transmitted by a blood-sucking parasite of Northwest America, which has recently demanded much attention from medical investigators.

Entomologists have named this pest *Dermacentor andersoni.* Ranchers, sheep herders and lumberjacks of the Northwest call it the wood tick, and all who know its potentialities for evil have the greatest antipathy for this inglorious but interesting insect.

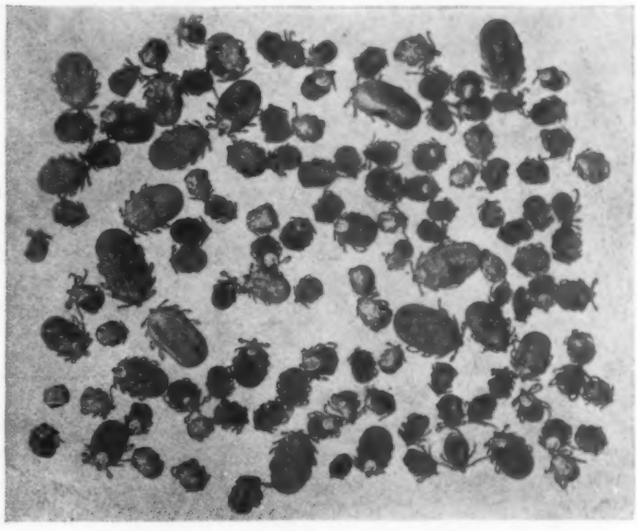
When the tick bites man its motives are not reprehensible, because its dominant urge is nothing more than hunger. Yet it is an unconscious carrier of human maladies, which strangely enough have no appreciable effect on the tick itself. This western parasite closely resembles its better known cousin the dog tick *Dermacentor variabilis,* whose native haunts lie east of the Mississippi River. But up to the present time, no evidence has been accumulated to incriminate the eastern relative as a disease bearer.

Although the tick is a common carrier of Rocky Mountain spotted fever, tularemia (a plaguelike disease primarily of rodents) and a mysterious disability known as tick paralysis, the symptoms of each of these human affections are so characteristic that it would be difficult to confuse them.

Description of the Disease

All three of these enemies of man form the subject matter for interesting chapters in the history and progress of medical science, but I wish to call attention only to Rocky Mountain spotted fever, which is the most feared of the three and for this reason, perhaps, has been more assiduously studied. Not many medical men are familiar with Rocky Mountain spotted fever. Osler's textbook, the American M.D.'s bible, describes it in less than half a page but devotes fifteen pages to malaria.

Symptoms of the disease begin from two to nine days after the tick bite. The onset with chill and fever is common to many other infections, but extreme prostration and severe muscular and joint pains are more characteristic of it. The typical rash that appears about the third day and then spreads to all parts of the body could not be mistaken for any other condition except, perhaps, typhus fever, and this does not occur in the Rocky Mountain spotted fever area.



Courtesy R. A. Cooley, Montana State Entomologist

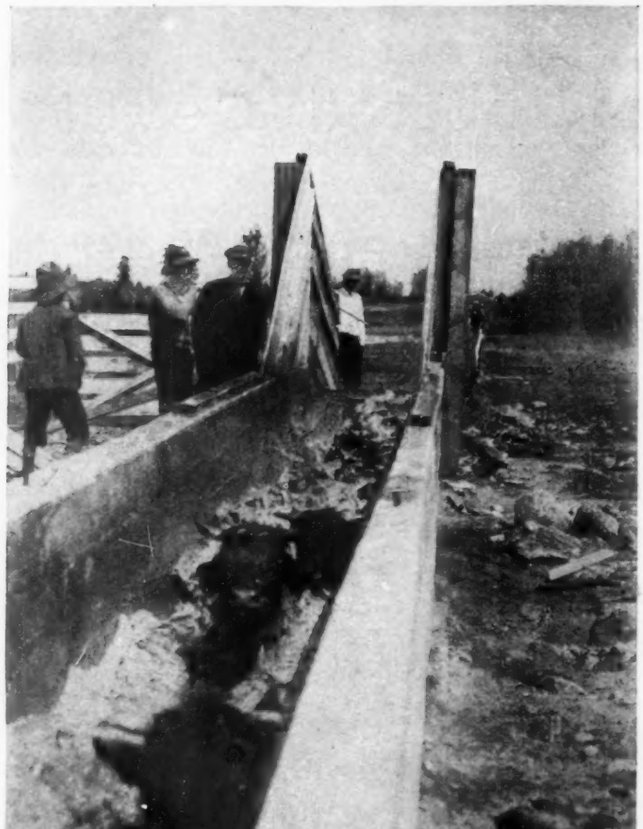
Male and female spotted fever ticks, in various stages of engorgement.

Is Frequently Fatal

The infection is frequently fatal, especially in certain well-defined areas in which the infection, for some reason yet unknown, exists in a highly virulent form, the mortality rate in some years reaching 90 per cent and more.

The disease does not occur outside of the infected area, which comprises roughly the states of Wyoming, Idaho, Utah, Colorado, Nevada, Montana, Washington, Oregon and Northern California. This area is, for the most part, thinly populated, yet more than 250 cases occur annually from March to July, corresponding to the season in which ticks are active.

Historically, there is no record of the condition prior to the advent of the white man, but the Indians were probably familiar with it. At least, they traditionally avoided certain areas that they thought were inhabited by evil spirits in the spring of the year. The first reports came in 1875 from army surgeons at frontier posts,



Dipping cattle to destroy adult ticks.

who considered the affection a mountain form of malaria or typhoid fever.

In 1899, Dr. Edward Maxey of Boise, Ida., declared the disorder to be a pathologic entity having no relation to other diseases, and it was not until 1906 that Dr. H. T. Ricketts of the University of Chicago proved that the ticks transmitted the infection.

Unusual Features of Disease

No specific remedy or prophylactic has yet been discovered, but by careful studies the affection has been found to possess remarkable and in some instances unique features.

For instance, in seeking to learn something of the distribution of the disease among animals, the early workers were surprised to find that all of the large domestic animals — the horse, cow, sheep and dog — and the large wild animals — elk, deer and mountain goat — were naturally immune, while man, monkeys and guinea-pigs were highly susceptible. On the other hand, the small wild rodents — rabbits, ground squirrels and chipmunks — acquire a mild infection, which is rarely fatal. These animals, moreover, are responsible for the continuation of the disease in nature, since large numbers of young ticks are infected by feeding on them during the acute stage of the disease, which has been acquired from ticks previously infected.

The infection in man, unlike that in rodents, plays no part in the maintenance of the infection in nature. In this respect Rocky Mountain spotted fever resembles bubonic plague, because the essential links in the chain of existence of plague are the rat and the rat flea, man playing a secondary rôle. By contrast, yellow fever, malaria and typhus fever may be mentioned as insect-transmitted diseases in which man is an essential host.

In a study of the infective agent in ticks, it was found that the eggs of infected females are infectious when injected under the skin of an animal. The young seed ticks, which hatch from such eggs, also retain the causative organisms — a true case of hereditary transmission of a parasite. Again, while ticks are inactive throughout the long cold winters, the disease organisms pass also through a dormant stage. This was shown by tests in which a large number of infected hibernating ticks were ground up and a suspension of their viscera injected into guinea-pigs. The animals did not develop spotted fever. Yet an emulsion of a single tick after the spring feeding contained enough of the virus to infect 5,000 guinea-pigs! Apparently, the presence of blood that the tick ingests stimulates the multiplication and revives the virulence of the minute disease organisms which the tick harbors through the winter. Consequently, the tick has been regarded as a kind of culture tube in which the organisms can multiply when the conditions and the food supply are suitable. Despite this need of blood, attempts to cultivate the organisms on blood mediums artificially prepared have invariably failed, and until this is done it is unlikely that an effective prophylactic vaccine or a curative serum can be developed.

However, by treating the emulsions of ticks with carbolic acid during the highly virulent stage of the organisms a vaccine which will protect animals for several months against fatal doses has been prepared. This vaccine is apparently harmless but has not been administered to a sufficient number of persons to warrant an opinion as to its value. The disease itself confers a lifetime immunity to those fortunate enough to survive an attack.

Preventive Measures Difficult

As a rule, a knowledge of the life history and habits of an insect carrier of disease is essential to the intelligent application of preventive measures, especially if such measures are to be directed against the insect host rather than the disease organisms that are found either in the insect or the body of the mammalian victim.

The fight against yellow fever, malaria and cattle tick fever are classic instances of how such knowledge largely controls and directs the methods of prevention.

The yellow fever mosquito, *Aedes aegypti*, is domestic in habits and is known to breed in stagnant water around homes. Therefore, by screening of patients and by elimination of breeding places in water barrels, tin cans and other receptacles, the number of mosquitoes can be so reduced that the disease is incapable of being propagated.

How Malaria Is Controlled

Malaria, too, may be controlled but with more difficulty, because the breeding places of the mosquitoes that spread it are usually some distance from human habitations and are extended over wide expanses of swampy lands. Malaria control is further complicated by the fact that man is a chronic carrier of the malaria organism and may infect a new crop of mosquitoes in the spring following that in which his infection was contracted. Mosquitoes that transmit yellow fever can be infected, however, only during the acute stage of the disease.

Texas cattle tick fever, while not a human infection, is another example of how certain life habits of the parasite make possible an effective control. The cattle tick *Ornithodorus moubata* depends for existence on cattle alone. It is strictly a one-host parasite. All cattle are, therefore, dipped in a solution that kills the ticks. The clean herd is then removed from the infected area for two years, during which time any ticks left die from starvation.

The disease bearing tick is unfortunately not a one-host parasite. If man were the only host of the tick, control of Rocky Mountain spotted fever would be as simple as the control of typhus fever transmitted by the body louse. It is a well know fact that typhus fever cannot exist in any community in which the people change their clothes and have them laundered once a week, because the nits or eggs that are deposited in the seams of garments would be destroyed.

The spotted fever tick on the other hand will attach itself to any available warm blooded mammal, and there is consequently every reason to believe the minute organism has been transmitted from tick to animal and vice versa for thousands of years.

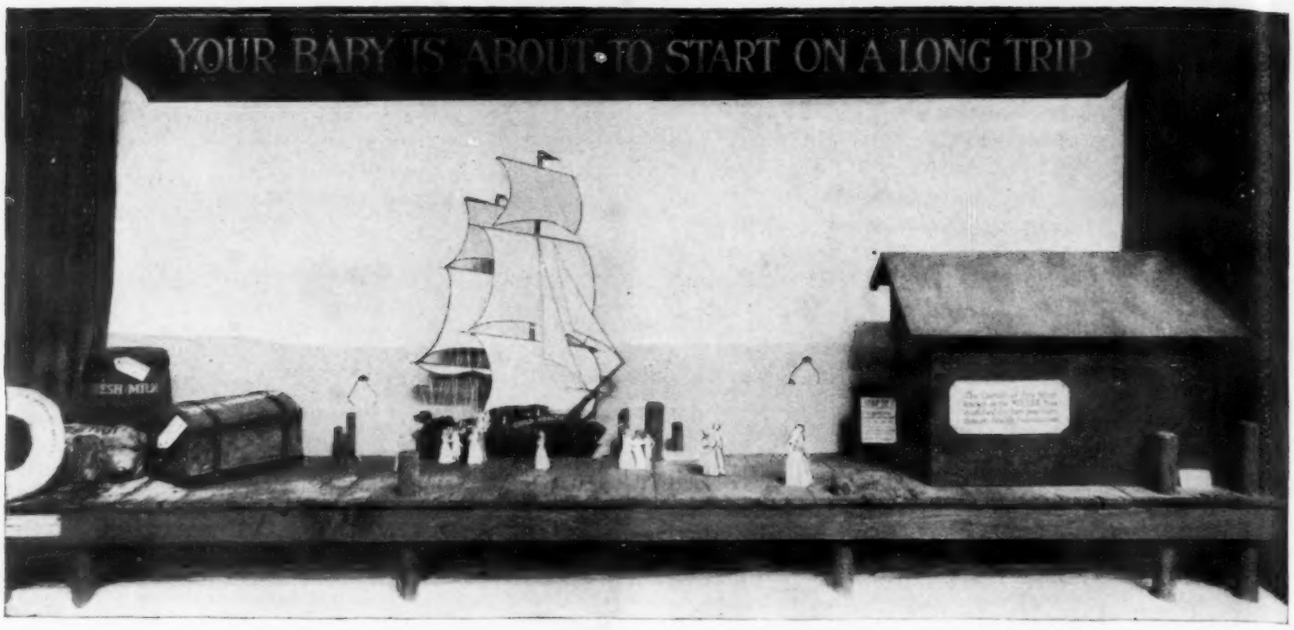
Attempts have been made to control the disease by the dipping of domestic stock and the killing of rodents near homesteads, but the multiplicity of wild rodents, the natural carriers of infection, in the extensive inaccessible areas precludes any approach toward eradication.

Will Take Years to Control Spotted Fever

The control of Rocky Mountain spotted fever and other tick-borne infections will unquestionably be a problem for some years to come in communities adjacent to the wild uncultivated areas that comprise so many thousands of square miles in the Northwest.

The disease is naturally prevalent among foresters, lumbermen, sheep herders, surveyors, hunters, prospectors, fishermen, vacationists and those who undertake to study it. Since 1912, five investigators have lost their lives from infection contracted in the laboratory.

It is truly a "ticklish" problem.



Health on Display

A Personally Conducted Tour Through the Hall of the Health of Mankind

By JAMES A. TOBEY

YOU are invited to come with me on a personally conducted tour through the Hall of the Health of Mankind. It will be no phantom excursion into the realm of the allegorical, for this hall of which I speak is real. It may be found in no less a place than the nation's capital, for it is a part of that remarkable institution known as the Smithsonian. Here is health on display, and you and I will be sightseers, as are innumerable others, and perhaps we shall learn something of the art of healthful living.

At the Smithsonian Institution

This Hall of Health is in the Arts and Industries Building of the Smithsonian group. It is a somewhat elderly edifice facing the Mall, that verdant expanse of parkway that extends from the Capitol to the Lincoln Memorial. It is flanked on the west by the Old National Museum and on the east by the Army Medical Museum, while opposite its somber red brick rises the stately white of the New National Museum and through the trees in the distance to the westward, one catches a glimpse of the Washington Monument. It is an appropriate setting for an important subject.

We go through the north door, which is the main entrance, where a somewhat languid doorkeeper records our entry with a click of his mechanical enumerator, and we are enrolled numerically with about 300,000 others who visit this building annually. Within there is much to beguile us, for the central hall beyond the entrance is devoted to American history. It is replete with interesting and valuable objects and directly above us hangs the first aeroplane constructed in the United States during the World War. For some of us that means memories.

But we are in quest of health, so we proceed to the center court, past the two immense Limoges vases that guard its portals, to the left around the fountain with its replica of the Goddess of Liberty on the Capitol dome, then past the great guns, still bearing the war paint of camouflage days, and on up the short flight of stairs to the Southeast Court Gallery.

Overlooks Wood Court

This is the Hall of Health. It is a sunny four-sided gallery overlooking a court which from its contents is called the Wood Court. There one sees pine and cedar from the North, mahogany and ebony from the South, bamboo from the Orient, timber from all the wide world, but even that cannot divert us, because it is health that we seek. That is all about us, for along the walls are tall glass cases and against the rail are flat glass cases, all filled with models and objects illustrating various phases of hygiene,

the science and art of personal health, and of sanitation, the science of community or public health.

A small placard at the outset cautions us to "look carefully, think, remember," for, it is opined, "personal health may be obtained with knowledge; public health can be bought with money." We may even weigh ourselves before we go further, since at the entrance is an excellent pair of scales, which no sightseer, no matter how blasé, has ever passed without giving a trial. One's weight is, of course, often an indication, along with other factors, of one's general physical condition.

If we travel eastward, like pilgrims seeking the light, we find on this gallery another journey portrayed. It is the beginning of the journey of life. Before us is a ship, swinging idly by a staunch old wharf. The ship bears the magic name of Child Health, and the captain of it, who, we are informed by placard, has qualified by having a health examination, is Mother. Overhead a sign informs us that, "Your Baby is About to Start on a Long Trip" and below is shown his passport, a clean bill of health.

Cargo of Milk, Fruit and Vegetables

The cargo is piled on the wharf, ready for shipment. It consists of fruit, vegetables and milk. In case of mishap there is a life-preserver, and, if we look closely, we find that it is labeled birth registration. The buoys that show the channel are also tagged; they are "breast feeding" and "light and air." The journey has been well begun by the American Child Health Association, which contributed this notable exhibit and also one on preschool care, to the Hall of Health.

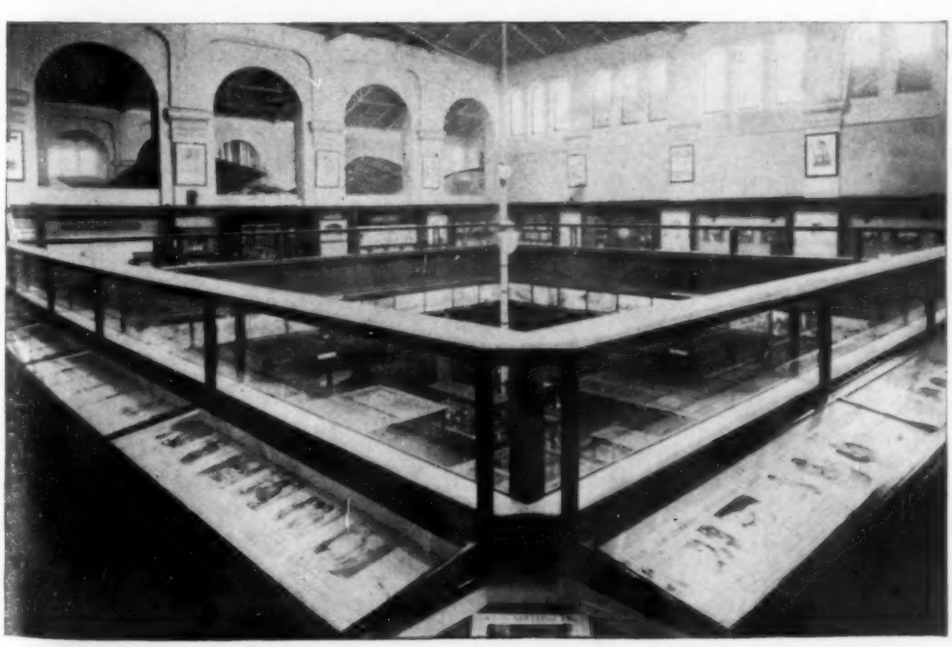
The runabout child is admonished to follow nine axioms, or at least the nine are suggested to the spectator, who may be a tiny toddler, his father or mother. Whoever gazes on this particular exhibit will find a thing of beauty, for each of the nine maxims is illustrated with delicately chiseled bronze models, the whole set off with a black velvet background and a large crystal mirror in the center. In the immediate foreground is a cow, but no ordinary cow, for the caption says that she is the Healthland Pet, captured singlehanded by boys and girls. Behind are four glasses of clear water, "wonder water, brought from the springs of youth." They gleam like gems against a silver setting.

Behind and above is, no, not a toothbrush, but a Pearl Polisher. There is, too, a Magic Sofa for sleep, and valuable jewels adding much to appetite, for they are vegetables. There is a Fortune Teller, consisting of scales for weighing. A ship is in full sail, but it is a bathtub ship. Nearby are Golden Coins, still used to carry on important business; they are fruits. A group of bronze athletes teaches the wisdom of play in the open air.

Social Hygiene Exhibit Unique

Perhaps the most impressive exhibit in the Hall of Health is on a subject not often delineated in museums. It is concerned with social hygiene, which "has as its general purpose the perpetuation of the family as a social unit in such a manner that it will contribute in the largest way to the happiness and usefulness of its individual members and to the best development of the race."

On a burnished gold background, this exhibit is divided into three parts, showing on one side the way life begins, by means of a number of realistic illustrations of the development of the cell. The central panel shows a set of concentric circles, the outer one having on it the tree of life, the next showing the father, the third the mother, and then finally the child in a glow of soft light. "The child," we are told, "is the growing point of progress. It needs mother, father and wholesome environment. The fam-



The Hall of the Health of Mankind, U. S. National Museum, Washington, D. C.

The Arts and Industries Building, U. S. National Museum, houses the Hall of the Health of Mankind.

ily is the best social unit yet achieved for giving the child that social heritage by which each successive generation may reach a higher level."

The third section of the social hygiene display presents the different activities — informational, protective, recreational, legal, educational and medical — that are needed in this movement. It is all most delicately and yet most charmingly told by the American Social Hygiene Association, which constructed this particular portion of the Hall of Health.

Near by is the figure of a knight in armor, bearing on his escutcheon the double barred red cross of Lorraine. He is the symbol of the modern health crusade in which six million children are enrolled. To attain knighthood in this fascinating order, the child must perform certain chores, which are reproduced in written form in connection with the exhibit. Thus, washing the hands before each meal, brushing the teeth, drinking plenty of water, drinking slowly two glasses of milk, playing outdoors, sleeping with the windows open, going to the toilet regularly, keeping fingers and pencils out of the mouth and nose, and taking one or more complete baths during the week form the ten daily and one weekly chore for one of the grades. The Crusaders have a creed and a code, and it is Good Health.

The National Tuberculosis Association is sponsor for this exhibit and has also deposited in the museum a set of four panels showing in a theatrical way the conditions that bring on tuberculosis; that is, such matters as the sedentary, sunless, malnourished, poorly ventilated existence of so many office workers. Other subjects shown on the panels are the necessity for early diagnosis, as at a clinic; the need for educational efforts to combat the disease, such as the instruction given to patients and to their families by public health nurses; and, finally, the possibility of cure, by treatment in a sanatorium.

Theater Effect Utilized

The theater effect, using lifelike, colored cardboard figures and scenes on a small, illuminated stage is employed in a striking way to depict other health activities. A number of these exhibits have been installed in the Hall of Health by the American National Red Cross, which thus shows its home hygiene activities, its first aid and life saving, its nutritional work and its nursing. The visiting nurse, aptly described as the courier of the gospel of good health, is revealed in the home and in the school. The American Red Cross has likewise contributed to the decoration of the Hall a number of gay, artistically colored child welfare posters, which grace the pilasters above the cases.

As we pass along, and it might be remarked we are going in a somewhat haphazard manner, pausing to gaze at those exhibits that attract our attention, we stop before a model factory. It indicates in a graphic way the essential features of proper industrial hygiene. On the three floors of this building are shown such indispensable aids to the health of the worker as the right kind of illumination, the proper methods of ventilation, the necessity for safe clothing, the sanitary drinking fountain, the correct posture for the worker, the dispensary facilities that are needed, and plant cleanliness in general.

Billions Lost Through Preventable Illness

When it is considered that reliable experts estimate that nearly two billion dollars is wasted annually on account of preventable illness and postponable death among the gainfully employed, the tremendous importance of industrial hygiene and sanitation is, or should be, apparent. This excellent model was constructed for the U. S. Women's Bureau and placed in the museum by that agency.

Other government departments have also contributed displays to the Hall of Health. The U. S. Public Health Service has been particularly liberal, not only having donated various exhibits, but having, in the early development of the Hall of Health two or three years ago, detailed a specialist in this type of work to assist in its planning and arrangement. The medical department of the army has likewise been a

contributor, as has the U. S. Bureau of Entomology. The Department of Agriculture is building an exhibit to depict the production of pure milk, an essential factor in good health.

This health museum has, in fact, done a valuable service in bringing together in one place illustrative objects from a number of bureaus of the national government, the health activities of which have been somewhat scattered, though recent efforts have been made to coordinate them more effectively.

In our peregrinations through the Hall of Health we have wandered about in a rather aimless way, a method not uncommon with sightseers. As a matter of fact, the exhibit is planned in a logical manner. As we enter, we should proceed straight ahead and go around the gallery clockwise. Along the entire western side are exhibits on "The World We Live In," showing such important environmental problems as the procurement of pure water, the safe disposal of wastes, the advantages of fresh air and sunlight, how insects and animals may spread disease, and the essentials of a healthful rural life. Thus, there are contrasting wooden models of sanitary and insanitary types of water closets made by R. A. Deal, a sanitary inspector in Virginia, who also has a flair for carpentry.

Enlarged photomicrographs show the bacteria that cause some of the important communicable diseases. These are illuminated from behind, so that the *Bacillus tuberculosis,* the treponema causing syphilis, the protozoa of malaria, and many other microbic organisms and parasites are made to stand out in realistic, if somewhat enlarged, manner. Beyond are delicately modeled glass forms of the organisms that live in water and occasionally cause trouble in the water supply. A striking display is the one at the beginning of the exhibit, which indicates how sanitary authorities stand between the citizen and disease.

From Infancy to Old Age

After the world we live in, its troubles and its recompenses, for it is a pretty good old world after all, comes The Health of the People, in which the road to health is shown as it proceeds through the various age periods from the way life begins, already described, to the mellow years of old age.

Prenatal care, infant hygiene, preschool and school health, adolescence, youth, maturity, middle age and old age are each displayed with an adequate hygienic setting. In addition, such special topics as mouth hygiene, mental hygiene, dressing for health and beauty (they go together), avoidance of dangerous diseases, and that most important aspect of healthful living, the health examination, have space devoted to them.

For the latter there is a model of an entire physical examination unit, showing all the steps in the human inventory, which every one should have at least once a year.

To describe it all minutely would be like revealing the plot of a drama in the newspapers. We must go and see it for ourselves. There are many other exhibits besides those that we have described and visited in our hurried jaunt. Some of the material is placed in the Hall of Health only temporarily to be displaced later by more effective permanent exhibits. Some of it is not of the same high standard as the more effective material, but Rome was not built in a day and years are required to complete museums.

Every good American citizen pays a visit to the capital of his country sooner or later, and when he is there he generally finds an opportunity to do some sightseeing. The Hall of Health should be included in such an itinerary.

Other Health Displays

Health is on display in other places. There is, for instance, an excellent public health exhibit in the American Museum of Natural History in New York City. Persons who have seen these two exhibits are vehement in urging that similar exhibits should be established in every museum in the country. Undoubtedly they should.

Yes, health is on display in many places, but the place where it is seen to best advantage is in the warm glow of wind-kissed cheeks, in the golden brown of a sun-tanned skin, and in the vivacity of the happiness that is the constant companion of salubrity. The most complimentary of phrases is "the picture of health"; the most fascinating of pictures is the reality of well-being.

Health is on display in the living examples of those who have learned the art of healthful living. In the acquisition of such knowledge the Hall of Health and many other halls of health are playing a notable and permanent part.

Impetigo

By Lawrence G. Beinhauer

HAVE you ever had impetigo? If not, many other persons have suffered its embarrassments and disfigurements. This disease, ever so contagious, is always prevalent, especially during the summer months. However, it is not restricted to the warmer months because its spread continues throughout the year, when contact with the infected persons is not avoided.

Impetigo contagiosa, as the name implies, is an acute contagious skin disease, spread by contact directly or indirectly with the infection. It is usually found in children between the ages of 2 and 10, but is not uncommon in adult life. The disease has no respect for classes of society and attacks the rich and the poor alike. It is a common complication of "seven year itch" and head lice, and is more prone to be found when personal hygiene and cleanliness are lax or lacking.

Frequent During Summer Months

This disease usually attacks the face, ears and neck, and not uncommonly the hands, feet and body. When once seen, the picture of yellow or honey colored, dry or oozing crusts about the nose, cheeks, ears and angles of the mouth cannot be forgotten. Its rapid spread and its marked cosmetic disfigurement make it a much dreaded disease.

During the summer months, playgrounds, recreation parks, swimming pools, bath houses and baseball fields offer the most logical places for its spread. With one person infected, it is easy to see how direct contact by person to person or indirect contact with infected wearing apparel, towels, water in the pools, public drinking utensils or candy and fruits passed about, which is a custom common with children, constitute the real source of spread of the disease.

In public schools or orphanages it may spread like wildfire, often necessitating quarantine or restriction of the infected ones from entrance.

In high schools, it is not uncommon in the gymnasium or on the football or baseball field, where it is often called the gym or football itch. In adult life, the barber shop is a common source of infection.

When the condition is suspected, it is always best to consult a physician for advice and treatment.

How to Prevent Its Spread

Two methods of approach are necessary for its eradication and cure. The infected person should be cleaned, the water changed frequently, should be isolated. Infected swimming pools inspection at all public places of meeting or recreation should be instituted and the infected or suspected ones should be debarred from entrance or a place in the activities. Especially, attention should be centered on public utensils, towels, basins and clothing that may have been exposed to contact with the infected ones. At schools, colleges, barber shops and other places of suspected source, a thorough cleansing and sterilization should be instituted. The public should be firmly educated to a knowledge of the contagious aspect of the disease and the importance of prophylaxis against it.

The prognosis of impetigo is excellent, as few cases, when properly handled, fail to respond to treatment.

For a disease that is so unrestrained, the response to treatment is remarkably simple, but one must always remember that the keynote in its eradication is prophylaxis—the protection to those at large—and that this must be followed by strict medical protection to the patient.

HYGEIA
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Plain Facts about Health and Disease

HEALTH NEWS OF THE MONTH

Health Control in Business

More and more, large manufacturing concerns, as well as department stores, are realizing the value of employing persons in good health and of maintaining them in good health during the period of employment. Out of 1,200 men entering Harvard University in 1922, less than 5 per cent were suffering with correctable defects. Out of a similar number of employees in a store in Pittsburgh, 95 per cent were suffering with correctable defects. Which of these two groups may be expected to carry on its work more advantageously?

Investigation of department stores showed that most of them are overcrowded and overheated; that little attention is paid to glare and inadequate lighting; that long standing and long sitting, resulting in overfatigue, are customary; that certain monotonous jobs are not sufficiently varied to produce the maximum output, and that the lunches of workers are hurried and poorly chosen. This is a serious indictment, and one that must certainly be corrected.

The majority of workers in modern stores are women, whose special problems also require attention. The functions of women are not easily borne, under modern working conditions, and it is necessary to provide a resting space for them.

Few workers purchase shoes that are proper for standing for many hours. Of ninety-seven women whose shoes were examined, it was found that thirty-seven had foot trouble or foot strain; forty-three wore shoes that were too short; forty wore heels that upset the body balance; nineteen others wore heels so high that they were injurious to the rest of the body, and fifty-nine pairs of shoes were so badly fitted that they produced distortions of the feet.

One wonders whether the employment agents of the department stores realize that many of the customers' complaints relative to the service rendered by employees may be directly related to the care of the employees' feet. It was found that aching feet more often occur among those who stand long on heavily padded, soft carpets than among those who stand on concrete or stone floors. Carpets laid close to the floor will give a firm grip. Thick padding under the carpet saves wear on the carpet, but allows so much give to the foot that it rubs the shoes, with burning and aching as a result.

Dr. Arthur B. Emmons of the department of industrial hygiene in the Harvard School of Public Health has indicated many other factors that department stores should take into account in caring for their help. The physician who advises in these matters must be an executive with the ability to see beyond the personality and physical ailment into factors that may bring it about; he must be able to consider economic and social conditions as well as those of disease.

The Hygiene of Old Age

Now that modern hygiene and sanitation have added some twenty years of expectancy to human life so that the average man is likely to live at least to the age of 55 years, more attention is being given to the special health problems that concern the elderly individual.

The man who has passed the age of 50 has a body which is no longer building new tissues, but which is constantly using up the old. In most instances, the brain is active, even beyond the time when the teeth, the gastro-intestinal tract and the joints are able to function efficiently.

A study of the factors concerned yield some interesting points. Investigations made by the British Medical Association showed that tall people are likely to live shorter lives than those who are short of stature. The majority of men who lived over 90 years were well built and of

average height. Few instances are known in which persons of gigantic stature, say 6 feet, 3 inches, have lived to an advanced age. This is believed to have some relation to the glands concerned with body growth, although such a relationship has not been definitely proved.

In the matter of weight, the person of average build is likely to live the longest. A man may well gain in weight up to the age of 35 or 40, but overweight beyond these years is not a health asset. Longevity is likewise an attribute of families, so that the hereditary texture of the body seems to have an important part. There are long-lived families recorded, but very few short-lived ones; obviously, because the early death of the members causes the family stock to disappear early from the scene.

It is the belief of some investigators that the reactions of the aged become blunt both to pain and to mental distress. The exceptions are, of course, neuritis and pruritus, inflammation of the nerve and extraordinary itching. These conditions cause much distress to the aged, constituting a special problem for the physician.

The body temperature of the aged is usually subnormal, because of the relative inactivity of the organs and the slower process of body chemistry. As a result they are cold, and are inclined to overdress themselves and to keep the windows tightly closed. Heavy clothing makes them disinclined to exercise; the stuffiness of the room makes them easy victims to minor respiratory diseases. It is believed that a proper amount of cold air and cold water should be insisted on as an aid to the hygiene of old age. The skin of the aged is dry and cracks easily. It may, therefore, be kept in better condition by rubbing with suitable oils, which makes it more pliable and less likely to yield to minor infections.

Diseases of Wild Animals

It has long been recognized that man is a part of the great scheme of nature and is affected considerably by the parasites of the animals about him. The germs of infectious diseases of wild animals likewise attack man, modifying their own lives according to the new soil on which they may grow.

African sleeping sickness, known as trypanosomiasis, is conveyed to man by the bite of the tsetse fly, which carries it from the antelope or other big game of the African districts to mankind. Once man himself is infected, it is, of course, quite simple for the tsetse fly to carry the disease from man to man.

Several South American infections of similar character are transmitted by a bug that lives on the armadillo. Others live on the opossum, and carry the South American form of trypanosomiasis from that animal to man. The disease leishmaniasis, which affects the blood, is propagated largely through a rodent-like species, known as the hamster, and carried by biting flies, such as the sand fly. The hamster is a species of field mouse.

A severe and fatal form of jaundice is caused by a spiral organism, which is found largely among rats, and it is coming to be believed that the disease is normally carried by infected water that is contaminated by the rats. A similar condition known as rat-bite fever follows the bite of an infected rat, and cases have been known of infection through the bite of a ferret or a domestic cat. Rocky Mountain spotted fever is transmitted by ticks, which infest the goat, the badger, the lynx, the bear and the coyote, favoring the Rocky Mountain goat chiefly. The Columbian ground squirrel and the woodchuck have also been involved in the spread of this disease. Tularemia is spread chiefly by the jack rabbit and the ground squirrel, and a special form of glanders is carried by the Malay rat.

The remedy for the prevention of these diseases is not, of course, destruction of the animals concerned, but the working out of adequate methods of protection for man and for the animals. In this work, the importance of animal experimentation is apparent. Thus, those who oppose investigation on animals are the worst enemies of the animals that they themselves would favor.

M. F.

BETTER OBSTETRICS

REGARDLESS of all the advances that have been made in the science of obstetrics, or the care of childbirth, there continues to be far too many deaths from this cause. These are believed to be the result of carelessness to some extent, but far more are due to ignorance on the part of those concerned in the process, including midwives and incompetent physicians. There are far fewer deaths among women who come early under competent medical attention, or who are cared for in good hospitals.

The chief causes of death of women in childbirth include secondary infection by bacteria through carelessness in sterilization of materials or of the hands of persons concerned in the work, hemorrhage as the result of accidental occurrences that are uncontrollable, but that

may be checked and overcome if seen in time by a competent physician, and injuries through too much force or crudeness in aiding the birth.

The professor of obstetrics in a Glasgow university, Dr. J. M. Munro Kerr, has listed the primary factors in lowering the death rate according to this analysis of cause. They include increasing the hospital accommodations for women of moderate means; inspection of all hospitals, homes or other institutions devoted to the care of the prospective mother; legal powers to remove the patient from her home to a hospital, if the home is deemed unsuitable for the process of childbirth; care in a hospital for practically all mothers undergoing birth of the first child; the supply of sterilized outfits in every instance, and legal insistence on the use of sterilized rubber gloves by physicians, midwives and nurses in attendance on such cases.

Such simple procedures will accomplish much toward reducing a death rate that represents only the failure of the public to avail itself of the proved facts of medical science. M. F.

HOW SOUNDLY DO WE SLEEP?

AN experimental study on sleep is being made at the Mellon Institute for Industrial Research. Preliminary to a study of sleep as disturbed by various conditions, observations on normal sleep have been conducted.

Twelve healthy young men, eleven of whom were students, served as subjects for observation. They slept in a quiet, well ventilated room, retiring at 11 p. m. and rising at 7 a. m. Each of the comfortable, single beds in which they slept was mounted on pendulum supports with ball and socket bearings and was connected with apparatus that was sufficiently sensitive to record the quick movement of a forearm or any movement of a whole limb.

The purpose of the experiment was to learn how activity in normal, healthy adults is distributed over the time devoted to rest and to compare these measurements with figures that have been obtained showing how strength returns as the result of sleep.

Each five-minute period in bed was treated as a time atom and was said to contain activity if any stirs of the sleeper were recorded within it. The rest-period was defined as the time from the middle of a five-minute interval in which activity occurred to the beginning of the next interval of activity.

The frequency of stirs among the sleepers was surprising. The popular conception of a restful night would probably be that the sleeper might change his position from four to eight times in eight hours, the average length of the rest period being from one to two hours. On the contrary, in 14,448 measurements, the subjects slept without stirring for an average length of only 11.26 minutes. In half of the observations the average length was less than five minutes. In only one of these thousands of observations was the rest period more than three hours.

It is evident that the average healthy person sleeps much less soundly—that is, with much shorter intervals without noticeable movement—than is usually supposed.

Another unexpected conclusion from these experiments was that the way a person sleeps is a definite personal characteristic. As a rule, the restless sleeper displayed short rest periods every night during the experiment.

Fatigue after a day of hard physical work in at least one observation was shown not to promote but rather to interfere with sound sleep.

There was, on the whole, a tendency for the least activity to be manifested in the first hour after the subject settled down to fairly steady rest, but steady rest was found to begin any time from ten minutes to two hours after retiring.

Some subjects rested more during the first half of the night; others during the last half, the first and last quarters, or the second and third quarters.

Many studies have been made of the phenomena of sleep, but there is yet much to be learned about it. J. M. D.

MEAT IN THE DIET

WHEN Vilhjalmur Stefansson, the Arctic explorer, returned from the far North in 1922 after a sojourn of some years, he was examined by New York physicians.

He had suffered with severe illness in the winter and spring of 1918. His symptoms included headache and fever, and the condition was diagnosed as typhoid. When taken ill, he walked about 40 miles against a blizzard, and then was carried by sled 300 miles from the Hersalul Islands on the arctic coast of Canada to the Episcopal Hospital at Fort Yukon. During the journey, he ate frozen raw fish and later large amounts of caribou meat and fish, sometimes boiled and sometimes raw and slightly frozen. Mr. Stefansson reported that out of eleven and a half years in the polar regions, he lived about nine years on what was almost exclusively a meat diet, and for one period of about nine months entirely on a meat diet.

When he returned to New York he was examined by several physicians to determine what the effects of this meat diet might be. According to their reports, Stefansson reached his maximum weight while subsisting on meat and especially on fish; he did not suffer from constipation or muscular weakness; teeth decay was less rapid; his hair became thicker and his scalp healthier.

On the basis of his experience and observations, Stefansson points out that views as to meat in the diet may well be revised. Neither he nor any of his men suffered ill effects from a long continued meat diet, and apparently this had no deleterious effects in their cases, at least, on the circulation of the blood or on the kidneys. He points out also that, unless it is religion, there is no field of human thought in which sentiment and prejudice take the place of sound judgment and logical thinking so completely as in many of our dietetic superstitions. M. F.

COOPERATION BY DIVISION OF LABOR

THE numerous volunteer and official health agencies now seeking health betterment too frequently work without knowledge of one another's plans and, therefore, at cross purposes and with poor results.

An admirable example of how such organizations can work more effectively is presented in Indiana. Cooperating with the division of infant and child hygiene of the Indiana State Board of Health, the Women's Federation, as part of a nation-wide activity of the National Federation of Women's Clubs, has undertaken to make a study of the home conditions as related to school life. Detailed studies are being made in a number of congressional districts in Indiana.

The state organization of parent-teachers, also as a part of a nation-wide activity, is engaged in a campaign to secure the examination by the family doctor of all children who are to begin school this autumn, in order that their physical defects may be corrected. The American Association of University Women has undertaken a study of the preschool child. The League of Women Voters is seeking the education of parents as to the vital importance of birth registration. The Tri-Kappa Society is the chief sorority that is assisting in the well baby work in Indiana.

Working under the advice of the infant and child hygiene division, which is kept fully informed as to their activities, these volunteer agencies are in position to make an important contribution to the welfare of the children of Indiana. The coming generation of young women is being prepared for similar activities by special courses of instruction in the problems of maternity and infancy. J. M. D.

THE FINGERS AND HEART DISEASE

THE human body is a vast interrelated system of smaller systems, which coordinate to carry on its functions. If any one of these is disturbed, the effects of the disturbance are visible in the others. Thus, it has been long known that infectious disease of the heart produces manifestations that become visible elsewhere in the body.

Should a portion of one of the little excrescences that develop in the lining of the heart or on its valves break loose and float in the blood through the large blood vessels into the smaller ones, it will become lodged at last in what is known as a terminal artery, from which there is no outlet or through which it cannot pass. Here it obstructs the passage of the blood and produces serious symptoms. The floating mass is called an embolus, and the disease that it produces is embolism. As might be expected, several or many emboli may break loose at once, and it is known that they are likely to occur in showers.

As Dr. George Blumer has indicated in a recent discussion of the subject, one of the manifestations of this disease is painful nodules occurring on the fingers and the toes. These nodules occur in some 40 per cent of cases of inflammation of the heart lining. They are usually accompanied by temporary swelling and reddening of the skin. They are slightly hard and have been described as feeling like flea bites. In other cases, the blood vessels in the deeper portions of the fingers and toes may be blocked, and the person may complain of pain on pressure of the part concerned. In still other instances, the obstruction is manifested by a little hemorrhagic spot under the finger nail, which looks like a splinter.

In cases of inflammation of the tubes leading to the lungs or of congenital heart disease, the fingers sometimes have a clubbed appearance with broad, flat ends. This condition is also common in inflammations of the heart lining.

It is, of course, not expected that the average man will be able to look at his fingers and diagnose any of these conditions. The description is offered merely as an indication of the detailed and meticulous study that the modern physician makes when confronted with a difficult diagnosis. M. F.

A Story of
Skinny Mouse
and
The Bread
and Milk
Girls

Written and
Illustrated
by
ELIZABETH
BLAINE
JENKINS

The Mouse That Sang

ONCE in a long, long time a little house mouse is born that can sing. He lifts up his pretty little head, opens his mouth and trills a tiny fairy note that sounds like an elfin flute. Little Jimmy Skinny Mouse was one of these singing mice.

Skinny Mouse was born in a hollow in the wooden beam of a country barn. His brother Dinny Mouse and his sister Tinny Mouse were pink as rose petals and quite fat, but Skinny Mouse was so pale and thin that he could scarcely squirm. His brother and his sister soon got so plump and wiggly that they pushed him out of the nest. That is why he had to grow up the best he could, which was not very good at all, for he was thin, had wobbly legs and was called little Skinny Mouse by his fond mama.

But, at any rate, Skinny could sing. His friends all pointed their claws at him and said:

"A singing mouse never gets along in the world. Singing will not help to put seeds, crickets, grasshoppers or sweet wild strawberries into your hungry tummy."

Jimmy went on singing just the same, Quee-quee-quee! He sang to the big yellow August moon nearly every night, all by his lonesome lone. His sister Tinny Mouse and his brother Dinny Mouse and his mother Jinny Mouse sat on the beam of the country barn and chinkled and chinkled, making fun of Skinny Mouse every time he sang a song.

"You can sing Quee-ee, but you cannot scurry over the floor and catch a grasshopper the way I can!" boasted Dinny Mouse.

"You can tinkle and trill mi-mi-mi, but you cannot jump from the haymow window to the floor," chattered Tinny Mouse.

"You can sing very sweetly, but I wish you would act like everybody else instead of like yourself," squeaked his mother in a worried voice. Then she added:

"You are too thin; your fur does not shine, and your legs are wobbly. In fact, you are not a proper mouse at all."

Skinny Mouse knew that he was not a proper mouse, but he went on acting like himself just the same.

When his little mice friends pointed their claws at him, Skinny Mouse felt very much ashamed. Tinny and Dinny could scamper over the floor and bounce from the window sill to the top of the wheat bin before you could

whisk a whisker, but Skinny had to wobble along on the floor. When Mother Jinny Mouse saw how he wobbled, she said:

"I'd give the half of my nice long tail if you would just get plump and strong like my nice Dinny and Tinny"

This made Skinny feel very, very sad, and he sat in the haymow window and sang to the golden August moon:

Squee, wee, wee, oh beautiful moon,
Send a nice little ray and send it soon,
Perhaps it will lead me far, far and away
Where I shall grow plump as a robin in May!

So you can guess what poor little Skinny Mouse longed for with all his heart.

You could not imagine a warmer, cosier mouse village than the big country barn. The nests were made in the nooks of the beams and in the floors and in the rafters, and each one had a neat little hallway that led into a warm, dry bed. When Skinny's mice relatives were hungry, they crept into the big mountain of fragrant clover and nibbled seeds, wheat grains and sweet herd's-grass and hunted for the insects that were sometimes thrown into the mow with the hay.

One day while Skinny was wobbling around, tagging after his sister Tinny and his brother Dinny, Tinny Mouse squeaked:

"I found a delicious dried wild strawberry!"

So she had, and she gobbled it all herself. Dinny Mouse shouted:

"I found a fat dried grasshopper, which is much nicer than a strawberry!"

Then Dinny Mouse sat on his hind legs and ate grasshopper, without giving Skinny Mouse so much as a nibble.

Cousin Squeaky Mouse chortled:

"I found a black cricket and a big ear of yellow corn. I shall take it home and live on corn and cricket for a long, long time." Skinny Mouse wobbled around and ate a few seeds that Dinny and Tinny had scattered, and wished more than ever that he could skitter around like a proper mouse.

After the mice children had eaten and had taken a drink from the little pools near the wind pump, they played games in the bar of moonlight that fell on the haymow floor. Jinny Mouse danced like a little whirlwind—thump, thump, thump—running after her own tail, until cousin Squeaky Mouse said: "Mercy! How fast Jinny Mouse can dance."

Dinny Mouse and Tinny Mouse played tag, and they scuttled back and forth so fast that cousin Squeaky Mouse said:

"Mercy! Mrs. Jinny Mouse, how fast Dinny and Tinny can run."

Skinny Mouse thought he ought to do something, so he looked up at the big, kind moon and sang:

"Quee—quee—quee!"

Cousin Squeaky mouse laughed until she had to hold her sides with her little pink claws. Then she said sympathetically:

"It is too bad that your son Skinny Mouse cannot do anything but wobble around and sing."

Dinny Mouse said: "Old Cat-that-snoops-in-the-dark will catch Skinny Mouse, unless he learns to run like a proper mouse!"

Tinny Mouse said: "Skinny, do stop that silly 'quee-quee-quee!' and go to play by your lonesome lone. Nobody wants you here, because you cannot do anything except wobble and sing."

Skinny Mouse felt very, very sad. He crept away all by his lonesome lone, just as Tinny Mouse told him to do.

When he crawled into his own little nest, a lady mouse nipped his tail and squeaked angrily:

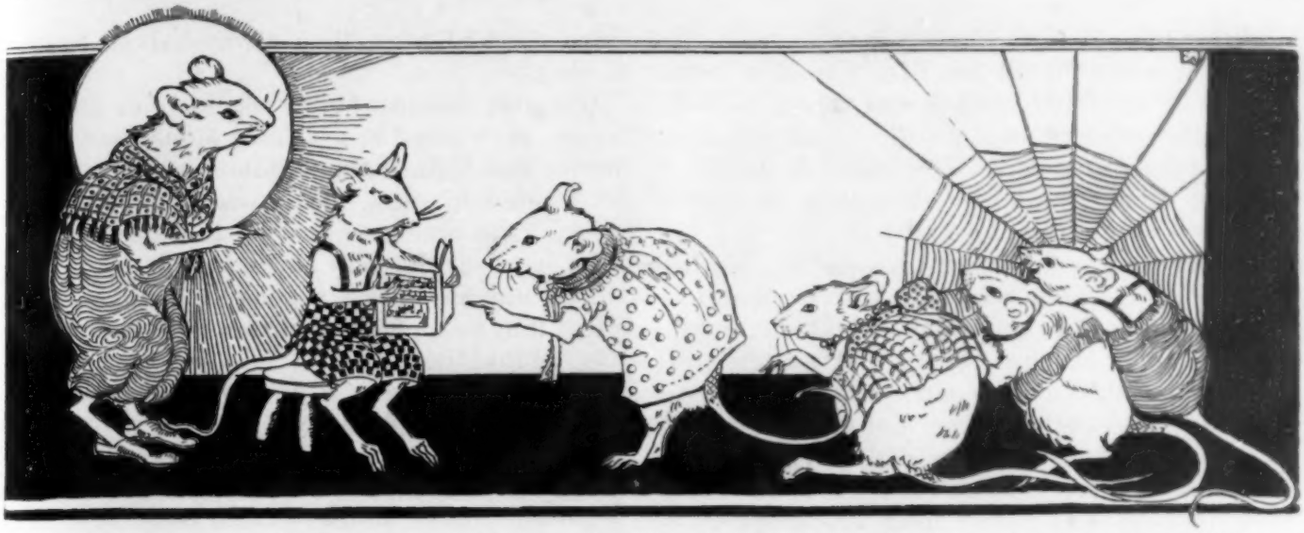
"Get out of my nest! I decided to bring my five pink, fat babies here until they grow up."

"But it is my nest!" said Skinny. "I made it very carefully myself." The little lady mouse, who was not a lady at all, gave Skinny a bite on the ear.

Then you never heard such squeaks! They tumbled over and over and nipped each other on the ears and the noses and the tails until there were not any more noses and tails on the lady mouse or on Skinny that did not have bites in them. The next minute Skinny found himself on the floor, and the lady mouse found herself in his nest with her five babies. Then all Skinny's relatives pointed their claws at him and said:

"That's because you are Skinny Mouse and can do nothing except wobble and sing."

Skinny Mouse was so un-



His friends all pointed their claws at him and said: "A singing mouse never gets on in the world."

happy that he decided to run far, far away. When he looked up at the kind old moon, he sang:

Squee, wee, wee, oh beautiful moon,
Send a nice little ray and send it soon!
I know it will lead me far, far and away
Where I shall grow fat and sing songs all the day!

What do you think the kind old moon did? He sent one of his little beams right into the old haymow window before Skinny could say "Squeak." Then the moon said:

"Just follow my little beam, and it will lead you to just the right place."

Skinny was delighted. He followed that moonbeam as fast as he could wobble. Out of the old gray barn, through the meadow and into a garden went Skinny. At last he came to a small hole just outside the farm house door. Then the little moonbeam said:

"Just walk into that hole and follow your nose, and you will come to a very nice place."

Skinny did just what the moonbeam told him to do. He wobbled along in the dark for a long time, then the way began to smell mousy and cheesy and very cosy. Then he walked plump into a very nice nest in the wooden insides of the old farmhouse. He was so tired and so happy that he went right off to sleep. When Skinny Mouse awoke, he was quite hungry.

"Now I wonder where I shall get something to eat?" said Skinny.

Skinny Mouse spread his whiskers so he might whisk dangers, and he began to sniff about him, with a very hungry little tummy inside of him. He climbed up and up, and all at once he found himself peeping out of a tiny hole into a beautiful pink and white room. There were three white beds with three pink and white coverlets and three pink and white little girls sitting at a bench in the middle of the room. But what interested Skinny most was this: They were eating something white out of little pink and white bowls!

Then a grown-up person came in and said:

"Did you enjoy your bread and milk tonight, little girls of mine?"

The first little girl said: "It tasted as good as good!"

The second little girl said: "Mine had lots of yellow cream in it. That is the way I like bread and milk, mother."

The third little girl poked out a plump little leg. "See how fat my legs are mother? Do you 'member how thin and wobbly they were, before I began to eat bread and milk?"

Skinny nearly tumbled out of his hole when that little girl mentioned wobbly legs. Before he could prick up his ears, the mother said:

"There is nothing better for wobbly legs than nice fresh bread and milk. Eat every bit of it and get right into bed so you will be asleep by the time the big moon peeps in at the window. Getting lots of sleep is another way to help wobbly legs to get fat."

After this the mother lady went away and the girls finished their bread and milk. Then the biggest little girl helped the other little girls undress and get into bed. When the moon peeped through the window they were all three fast asleep. Skinny looked at the little pink and white bowls and said:

"If that bread and milk is good for their wobbly legs, it will be good for my wobbly legs. I will eat my dinner out of that little pink and white bowl."

Skinny crept softly over the floor, up the legs of the little bench and jumped into the pink bowl. There he found a nice little bit of bread and milk, which he licked up with his little

pink tongue. It tasted better than anything he had ever eaten in all his life. He licked the bottom of the bowl until it was clean; then he sat on the rim and sang a little thank you song to the nice old moon. The children heard it in their dreams and they thought a nice little fairy was singing in the night.

Skinny scurried to bed, because the mother lady said that was good for wobbly legs too, and he slept a nice long sleep. Next evening he peeped out of the hole again and waited until the three children had eaten their bread and milk; then he ate his bread and milk, and sang his song of thanks. He decided that bread and milk was the nicest mouse dinner that one could wish for. It was better than grasshopper on toast.

For a long time Skinny Mouse did this same thing every day. Soon he began to feel different. Instead of wobbling off to bed as soon as he could, he went down into the garden and played tag with the garden mice. His old friend the moon said:

"You are getting to be a proper mouse, on that bread and milk diet, aren't you Skinny?"

"Why, so I am," replied Skinny, as he suddenly discovered that he was not skinny at all. He was sleek and silken gray and plump as a little mouse could be. His legs had lost every single wobble, and he could bounce up and down like a rubber ball. The garden mice thought he was quite wonderful, and, when they were tired of play, they always asked Skinny to sing.

One day Skinny Mouse decided to go back home. He wanted to see Tinny Mouse and Dinny Mouse and Mother Jinny Mouse, and most of all he wanted to show the haymow mice what a sleek, handsome creature he had become. So back he went the very same way he had come.

The haymow mice squeaked in admiration, when that fine, plump, handsome Skinny Mouse walked into the barn.

"I cannot believe it is my brother Skinny Mouse!" squeaked Tinny.

"You are not my brother Skinny Mouse at all!" said Dinny Mouse.

Mother Jinny Mouse looked very long and carefully at her son. At last she said:

"If you are really my son Skinny Mouse, sing! I could never forget your voice."

Skinny Mouse sang:

Squee, squee, squee,
I've been far away,
And I ate bread and milk
At the end of each day.
And now I can lick
Every mouse in the mow.
Come out here quick,
And I'll show you just how!

But not a mouse disputed his word. They all agreed with everything he said from that time on, and they all wished very much that they could find bread and milk in a pink and white bowl the way that Skinny Mouse had found it in the farm house on the hill.

The Cucumber

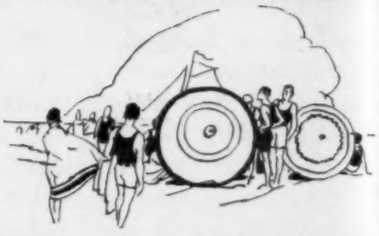
THE fresh, cool cucumber had its home in India 3,000 years ago. When it was brought into Italy, the Emperor Tiberius liked it so much that he had special frames made with a kind of glass for growing cucumbers in winter, so that he could eat them all the year around.

Suggestions for Coloring This Page with Crayon

Color the elephant light gray, with a purple and orange blanket and with a purple and gold palanquin on his back. Make his tusks a light yellow, or ivory, color. The men should wear red and blue turbans and their robes may be trimmed with red. Make the walls and turrets brown, and the grass and the cucumber green.

Duplicates of this poster mailed to any address, postpaid, at 40 cents a dozen. No orders for less than a dozen.

News *and* Views *from the Field of Health*



DIET FOR CHILDREN'S SUMMER CAMPS

Certain substitutes that may be used in the diet in camps so remote that food supplies are restricted have been suggested by Jessie Cole, nutritionist of the New York State Department of Health.

For cooking, powdered or evaporated milk may be used, but each child should have not less than one pint of milk daily. If fresh fruit is restricted, dried fruit, at least, must be served daily. Canned vegetables, particularly tomatoes, and finely chopped raw cabbage and carrots may be used in place of fresh vegetables, if these are not abundant.

Dried peas and beans, because of their valuable mineral content, should be served frequently; they may be used as soup on cool days. Dark cereals and dark breads are also recommended by Miss Cole. Special attention in selecting a summer camp site should be given to its accessibility to a good food supply.

GASOLINE HOBO LEAVES TUBERCULOSIS TRAIL

Tuberculosis has become migratory, like the flight of birds, says George A. Collins, superintendent of the Denver General Hospital. The responsibility for this rests with the auto tramp, he thinks.

Tremendous numbers of people are touring the country, following the seasons from section to section. The lack of sanitary arrangements in their automobile homes provides an excellent breeding place for disease germs, some of which are passed on to the neighboring auto homes, and even to the residents of the communities favored by visits from these gasoline hobos.

The conditions under which eight persons, one of them an invalid and six of them young children, live in a four passenger car could hardly be regarded as healthful. Such conditions are constantly found by social workers.

Half the tuberculous cases now treated at the dispensary in Denver are from places other than Denver. Of the 79,433 tourists parked for a week or more at the camping ground inside the city limits during 1925, more than 20 per cent were health seekers, and a menacing proportion were tuberculous or might easily become so.

While recognicing the fact that the automobile has brought much progress and happiness, Mr. Collins thinks it is bringing much disease, and he suggests, in an article in *The Nation's Health*, that the automobile industry should join in the crusade against tuberculosis.

PREVENTING PROSTRATION FROM HEAT

Numerous cases of heat prostration could be prevented if people would just exercise a little judgment, points out David Van Schaack, vice-president of the National Safety Council, who offers the following hot weather safety suggestions:

Cool the body thoroughly at least once every 24 hours by bathing in cool water, prolonging the bath as much as is necessary, thus keeping the skin in good condition so that perspiration is free.

Of course, light clothing should be worn in summer time and people should avoid long exposure to excessive heat. People should not work in the heat when they are overtired.

Drink plenty of cool water, but beware of too much ice water when you are overheated.

Eat wholesome food but not too much of it.

See that the bowels move regularly.

Control your temper. Don't get excited.

Be sure that both your place of business and your home are well ventilated.

Get at least seven hours' sleep every night.

Alcoholic drinks are not recommended for summer consumption.

HINTS FOR THE LEMONADE STAND

Lemonade actually becomes sweeter after it has stood for a few hours, according to a report from the biochemical laboratory of the University of California. Freshly made lemonade is sharper and sourer than that which has been stored for a little while before using it. This is because its chemical composition changes.

Within two hours all the cane sugar in lemonade is replaced by a much sweeter mixture of two simpler sugars. This is brought about by the action of the citric acid contained in large amounts in lemonade. The resulting beverage, being partially digested, is considered more readily assimilated than the fresh sugar.

By allowing lemonade to stand two hours while it gathers sweetness, much less sugar need be used. In view of the excessive sugar consumption of the nation, this becomes a point of some importance.

DINING OVER THE KITCHEN SINK

Instead of spending a social hour over the lunch table while eating the noon day meal, as was formerly the custom, thousands of persons now snatch a hasty lunch at quick lunch counters, soda fountains and other similar places.

Persons who would not think of eating over their own kitchen sink, eat with complacency at a counter at which dirty dishes are piled high and are being dipped in a small container of dirty water, rinsed in cold water and reserved, charges the Dayton, Ohio, health department.

This habit of hasty eating has led to many unhealthy conditions, among them poor digestion for the eaters. The food that is cooked and served in such places is usually just as hastily prepared as eaten, and is often of poor quality and indigestible.

Food should be served in a room separate from that used for preparing it and for washing dishes, and the equipment for dish washing should be adequate properly to cleanse and sterilize all dishes.

SUN-BATHING SUITS FOR CHILDREN

Much of the benefit derived from sea or lake bathing in the summer time is due to the sunbaths that one gets by spending several hours a day on the beach, with arms, legs, neck and face exposed to the sun's rays.

Sun baths need not be limited to babies, states a recent report from the Children's Bureau of the U. S. Department of Agriculture.

The more sunlight little children receive, the better they will withstand colds, infections and contagious diseases. Country or city children that cannot go bathing in lake or ocean may have sun baths by wearing bathing suits when they play outdoors. Sun-bathing suits may consist of regular bathing suits; of thin, short, sleeveless, low necked slips or rompers; or of simple, sleeveless, cotton underwear. They should leave as much of the skin exposed as possible.

Children's clothing should not follow the styles, but in summer should be sleeveless and cut low in the neck.

SPIDER BITE MAY BE POISONOUS

Poisoning from the bite of a black spider has been reported in a number of cases on the Pacific coast, according to a recent article in *The Journal* of the American Medical Association.

The female is responsible for the bite. This spider is often called "shoe-button," because of her appearance, or the "black widow" because of her custom of eating her mate. She builds her web in dimly lighted places, frequently in outdoor water closets.

The bite is painful, the pain spreading to the back, limbs and abdomen. Typical symptoms of poisoning follow. The treatment has consisted mainly of sedatives, stimulants and eliminative measures.

Recently serum treatment has been tried with gratifying results.

BLIND BELOW PAR PHYSICALLY

Blind students are generally below par physically, states a report, in *The Journal* of the American Medical Association, of the work of two Japanese physicians, Drs. Hasumi and Mori. The students examined were between 13 and 26 years, and many had lost their sight as a result of syphilis or gonorrhea, which were also responsible for some of the poor physical development. However, the chief reason for this condition was lack of bodily exercise.

Stress Importance of Minor Injuries

A SCRATCH on the thumb may not seem worth bothering about, but employees of the Western Electric Company are taught that such minor injuries may result in the loss of a hand or arm, and are constantly urged to report them at once, that they may be properly treated. Supervisors are always on the lookout for such slight injuries among the men.

The safety work that is done in the company's plant, the hospitals and emergency dressing rooms, the first aid classes and all the other devices for protecting the health and lives of the employees are described in a recent number of the *Western Electric News*.

The posters reproduced above are selected from a number of striking color posters issued by the Western Electric Company for display in its plants. All point out some health or safety lesson.

IRRITATION FROM WOOD TURPENTINE

A number of outbreaks of skin irritations have recently been caused by the increasing use of wood turpentine in various industries, according to Dr. Carey P. McCord, writing in *The Journal* of the American Medical Association. This irritation was not present when gum spirits of turpentine was used in these same industries.

A return to the use of gum turpentine is impractical on economic grounds, but the trouble may be remedied by more careful fractionization in the process of distilling the wood turpentine, thus separating the numerous irritants from the relatively harmless turpene oils.

ALABAMA CITIES DRINK MORE AND BETTER MILK

The increased consumption of a better grade of milk, in itself an important result, was brought about in eight Alabama cities that adopted the standard milk ordinance recommended by the U. S. Public Health Service, although the fundamental purpose was the production of safe milk under approved sanitary conditions.

During a two year period in these cities, the general milk sanitation rating increased 85 per cent, the production sanitation rating 70 per cent and the amount of market consumption 50 per cent, according to the report from the committee on a standard milk sanitation program.

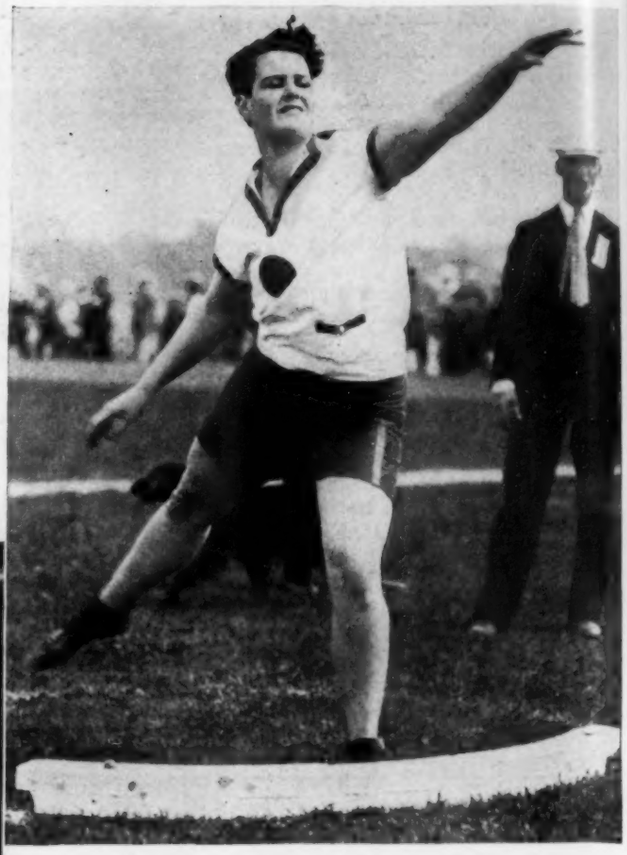
PSYCHOLOGISTS MEASURE PERSISTENCY

A new method of rating a person has been developed by Dr. John B. Morgan of Northwestern University and Hazel L. Hull of the University of Iowa. They have devised a "persistence stimulus" puzzle in the shape of an alley maze, with increasingly difficult problems, ending in one impossible of solution.

By means of this scientific puzzle, persons can be rated in a scale of relative persistency. Because this trait cannot be measured in a traditional manner, a situation had to be created that would produce an expression of the trait.

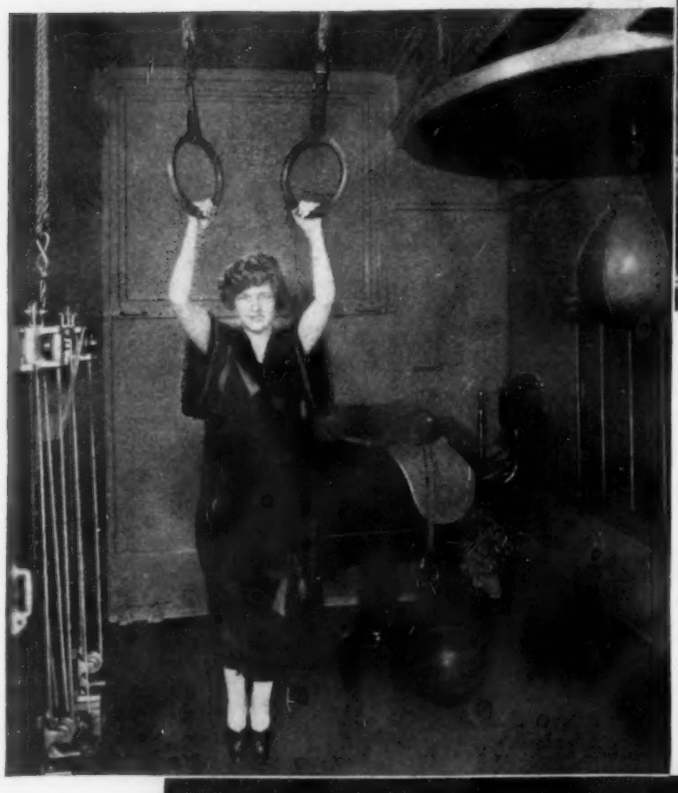
CHAMPIONSHIP FORM

Muscles developed in swimming helped Miss Rena McDonald win the New England championship in the 8 pound shot put.



TRAVELING GYMNASIUM

Travelers need not forego their daily exercise now that the Pullman Company has equipped a gymnasium car.



FEATURE OF MARATHON MEETING

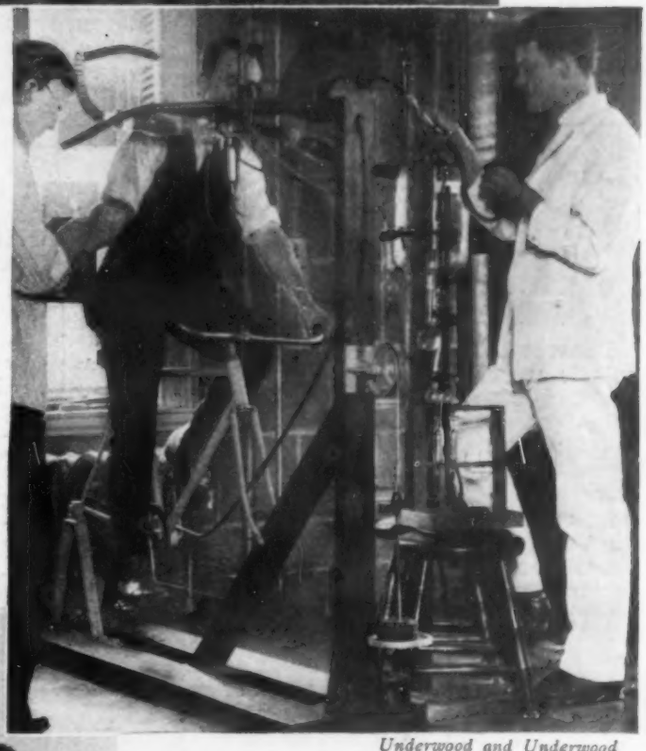
In England the steeplechase is a favorite race. The water jump might be pleasant if the race was run on a warm day.

Photos by Pacific and Atlantic

Underwood and Underwood

TRAINING FOR NEW RECORDS

By strenuous, regular practice these girls hope to break some records in their track event.



Underwood and Underwood

RIDES BICYCLE IN HEALTH STUDY

Daily rides on the bicycle machine are being made to study the effects of body work on oxygen consumption. The circulation rate in health and disease may thus be determined. The results will be of special interest to persons suffering from heart and respiratory troubles.

United News Pictures

HEALTHFUL EXERCISE

Another vigorous outdoor exercise by which girls are keeping fit is lacrosse. These are two Bryn Mawr college teams.

POLICE CHIEFS GIVE CAUSES OF TRAFFIC ACCIDENTS

Carelessness of drivers and carelessness of pedestrians, lack of standard traffic signals and congestion of traffic were the four principal causes of traffic accidents, in the opinions of the police chiefs of the larger American cities.

A questionnaire was submitted by *The American City* to the chiefs of police of all cities of over 5,000 population throughout the United States. Replies were received from 480.

Speeding, intoxication, incompetent drivers, glaring headlights, petting parties and physical or mental disability were the next major causes of auto accidents, in the order named. The chiefs were almost unanimously in favor of a law requiring more exacting and uniform drivers' examinations previous to the issuance of licenses, and of legislation requiring examination of mechanical parts, especially brakes.

They were also in favor of all-steel construction of closed bodies, as they believe that the strength of the steel saves the lives of the passengers in many wrecks, and that the reduction of the size of the pillars supporting the top gives the driver a better view of the road and thus permits greater opportunity to avoid accidents.

TUBERCULOSIS AND HEART RELIEF RELATED

Because heart disease and tuberculosis are closely related in some ways, workers in the respective fields should cooperate, in the opinion of Dr. Hoyt E. Dearholt, secretary of the Wisconsin Anti-Tuberculosis Association. In support of this opinion, Dr. Dearholt cites the experience and records of the Association's traveling clinic, which conducted examinations of 70,000 patients in 300 communities.

A physician examining a patient for tuberculosis could not fail to find heart disease, if present, nor would he fail to tell the patient of the findings and warn him to have appropriate treatment. The same condition prevails in the work for discovering and giving treatment and vocational guidance to pretuberculous children. In a group of Milwaukee children examined for this purpose, the clinic found two and a half times as many potential victims of heart disease as of tuberculosis.

The first danger signal of these two diseases—fatigue on slight exertion—is identical, as is the treatment—rest and an intelligently prescribed daily régime, intelligently carried out for a lifetime. The antituberculosis machinery, including open air schools, sanatoriums and other facilities, would require little alteration to meet the needs of heart cripples. In small communities, in which there are not enough pretuberculous children to justify a demand for such equipment, there would probably be sufficient needs for combined facilities for the two conditions.

In an age of business, it would be better policy for these two interests to combine than to compete for interest and support, advises Dr. Dearholt.

CURIOSITY NORMAL IN CHILDREN

The child who is always curious is perfectly normal, said Dr. Edward A. Strecker in a recent address, in which he enumerated some of the qualities of mentally sound children. Curiosity about sex is not abnormal. The reason children are usually more curious about sex than about other matters is that sex has always been made attractively mysterious.

Children should have ability and the desire for movement, should be ready and willing to imitate, should respond to suggestion, should be very curious, should love power and should have a dash of savagery and a seasoning of romance. There should be sufficient intelligence to bring out these traits, sufficient emotional virility to impress the lessons they teach, and enough moral judgment to act as a partial check.

A sick mind is more apt to be accompanied by a decrease in these qualities than by any excess of them.

CARELESS SMOKERS ARE SOURCE OF DANGER

Damage through fire amounting to $170,910,470 in five years was caused by matches and smoking materials in the United States, according to the National Board of Fire Underwriters. The loss of life has been equally great, children and innocent persons being the victims of the carelessness of others, in most instances.

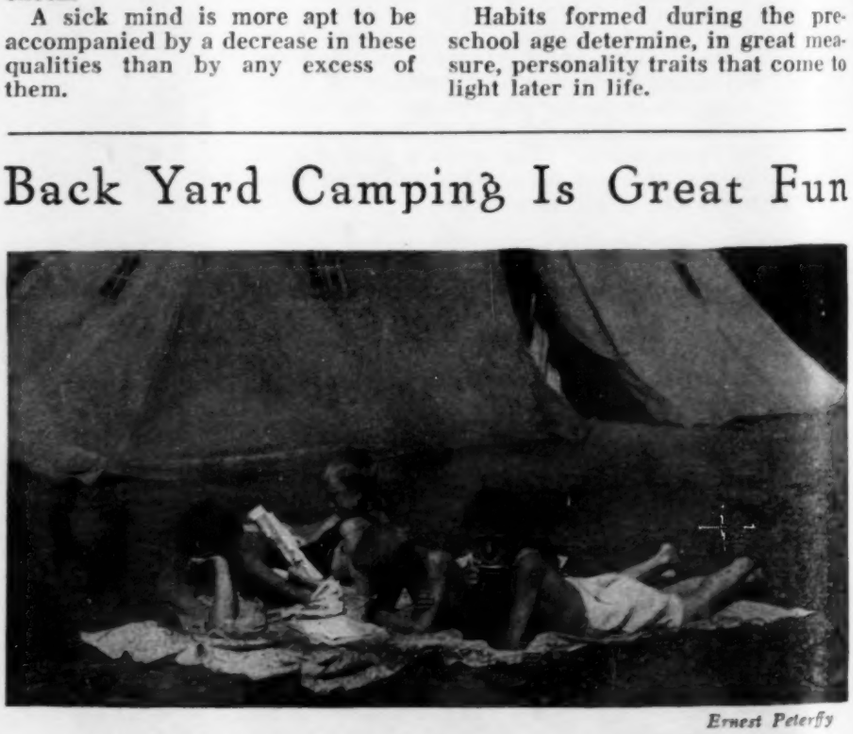
The use of 770,000,000 matches every day requires extreme care in their use and disposal, particularly disposal, for it is carelessness in disposing of matches, cigarets and cigar stubs that has been responsible for the worst fires in factories, offices, homes, clubs, hotels, garages and even churches.

There is a fire a minute in America today, on the average. In the big percentage of these that are due to smoking, it is not the "smoke" but the smoker who is at fault. The industrial worker is obviously the largest factor influencing fire safety. Sharing the responsibility are the parents that do not protect their children from disaster by keeping matches in safe places.

Even a comparatively careful smoker may be at fault. A man who would not drop his unextinguished match or cigaret into a waste paper basket or on the rug of his home may never think about flipping his stub into a carpet of pine needles or inflammable grass.

Habits formed during the preschool age determine, in great measure, personality traits that come to light later in life.

Back Yard Camping Is Great Fun



Ernest Peterffy

All camping is not done in organized summer camps, or even in the big woods. The back yard can furnish plenty of adventures to imaginative childhood. Children will spend hours in perfect contentment in a tent on the lawn.

MENTAL HEALTH RULES

1. Acquire the habit of emotional self-control. Conscious repression is a source of strength.
2. Harden yourself to endure slights, criticism, prejudice, dislike and even abuse. Extreme sensitiveness is unhealthy.
3. Exercise the senses, learning to see, hear, touch, taste and smell more accurately every day.
4. Put aside unhealthy images and ideas. Don't fight them particularly, but turn your attention to something interesting and healthy.
5. Increase the accuracy of your thinking. Exercise the mind while working and playing.
6. Control your attention, never letting it dwell on the painful or useless.
7. Learn to practice.
8. Learn to relax.
9. Imitate good models; keep away from others.
10. Increase your physical and mental lightness.
11. Be sure your ruling motives are good and not impelled by hatred or jealousy.
12. Establish normal relations with other people.
13. Establish a healthy philosophy of living; have a good goal.

These rules are taken from the summer school course in public health and nursing at Cleveland.

NEWER DUTIES OF CITY HEALTH DEPARTMENTS

The control of the smoke nuisance, regulation of transportation and detection of milk frauds are activities that the health departments of New York and several other cities have taken over, although they might seem to belong to some other department, points out the *New York State Journal of Medicine*.

Physicians find that smoke has a bad effect on sick people and they also believe that the soot, tar and sulphuric acid in the murky air are important factors in causing respiratory diseases. This becomes a problem of health rather than of general comfort.

The danger of infection on crowded cars, as well as the physical discomfort and fatigue, has caused the health department to consider the problem of transportation during the rush hours. The arrangement of a time schedule for the closing and opening of offices and theaters, so as to spread the maximum travel morning and evening from one-half to one and one-half hours is considered the solution of this problem.

Another important function of the health department is the detection of instances of milk adulteration, in order to insure the purity of this food.

TIME TO BE CAREFUL

Parents should keep a close eye on children about a campfire. Many picnics have ended disastrously when clothing became ignited from flying sparks.

PRIZES FOR STORIES

The best stories dealing with some feature of public health will be awarded cash prizes by the Harmon Foundation through the survey associates, it is announced. The sponsors of the competition hope that it will bring to light new ideas and methods in public health work.

CLEANLINESS IS EXPENSIVE

The cost of personal and household cleanliness for a certain family was found to be at least $10.95 for each person per month, according to the *Labor Woman*.

The items included soap powder, floor polish, laundry soap, shoe polish, bath salts, toilet soap, shampoo powder, tooth paste, brooms, brushes, combs, pans and cloths. Labor was not included except in a few items that had to be sent out to a laundry or cleaner.

Whitewashing, painting, papering and cleaning carpets added to the items mentioned made up the total.

RESTRICTION ON USE OF MEDICATED SOAP

A soap that contains sufficient quantities of medical substances to have medical properties should not be used except on the advice of a physician and should not be sold to the public without a physician's prescription.

The person with a skin disease is not qualified to judge the therapeutic value of such a soap or his own need for one. Ordinarily, a soap is meant to cleanse the skin and should be bland, neutral and made from pure materials.

NERVOUS CHILDREN ARE SUBJECT TO CHOREA

Chorea, or St. Vitus' Dance, is more apt to attack nervous children who are not very robust. Fright, overwork in school, and rheumatism are some of the causes, according to a bulletin from the New York State Health Department.

The disease comes on gradually; the first thing noticed may be an unusual irritability and nervousness in the child. He will have difficulty in writing and dressing himself; he may drop things, and his speech will be hesitant. Spasms affecting the muscles of the face will also be noticed early. Then irregular, spasmodic movements of all parts of the body follow. These movements cannot be controlled by the child and are worse when he is excited, embarrassed or tired, but do not take place when he is asleep.

Recovery usually occurs in from six to ten weeks, sometimes longer. If the heart is not affected, the recovery will be complete although there may be a second or third attack.

Children who have once had chorea should be closely watched, especially in the spring, when they are apt to be tired from school. They should have long vacations and not be put under any nervous strain.

The child with chorea should be under the care of a physician. He should be taken out of school, and should never be punished or ridiculed. Hospital treatment is best for him. Complete mental and physical rest are most important. Gentle massage and warm baths are helpful.

UNIQUE ASSOCIATION OF GERMAN NURSES

An old and unusual nursing association is the Mutterhäuser in Germany.

This organization performs a double function. It not only guards and fulfils the needs of the nurses, but also, through a committee of lay women, shoulders part of the community responsibility for philanthropic work. The first of these associations was founded in 1868, says the *World's Health* in describing the association.

The education of auxiliary nurses, public health work, disaster relief and war nursing are some of their activities in preventing moral, physical and economic need.

Each Mutterhaus tries to supply its members with work suited to the ability of the person. The nurses are paid the standard salary, which is turned into the treasury of their organization. From this they receive lodging, food, uniforms, education, and insurance or pensions.

Questions *and* Answers

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed.

Perspiring Hands

To the Editor:—Is there any preparation to stop undue perspiration of the hands? In hot weather my hands are continually moist, and even in the winter I suffer from this. My hands are red, and ordinary whitening preparations seem to have no effect.

S. U., Ohio.

Answer.—The combination of red hands and excessive perspiration suggests sluggish circulation, of the chilblain type. The most effective treatment is exposure to x-rays. This method of treatment requires much skill and experience, however, and no operator that is not familiar with the technic should undertake it.

Skin Disease

To the Editor:—I have an ailment that seems to be of nervous origin. On becoming excited or warm, the skin on my entire body rises in points that resemble gooseflesh. This rising is accompanied by intense itching, burning and a prickling sensation that feels like needles sticking into the skin. If I sit quietly in a cool place for five minutes, the itching and burning cease and the gooseflesh subsides. When I have a severe or prolonged spell, small red bumps are left under the skin after the gooseflesh subsides. These bumps remain for ten or fifteen minutes and then disappear. The skin on my hands and wrists has become dry and cracked. I have had this condition for three months; at present I am taking ultraviolet ray baths. Do you believe that these baths will remedy the condition?

A. N. T., California.

Answer.—The condition described is apparently related to hives or urticaria. Attacks of this disorder may be precipitated by heat or cold, excitement, exertion or emotional disturbances. It would be advisable to have a careful examination to determine the cause.

The circulatory system, the kidneys, the gastro-intestinal tract, the ductless glands and the blood-forming organs should all be investigated. Protein skin sensitization tests are advisable in some cases. The ultraviolet ray would probably be of little value.

Luminal Addiction

To the Editor:—A few years ago a physician suggested that I take luminal tablets as a cure for nervousness and insomnia. I have taken one tablet nightly ever since. Is the habit harmful? If so, how can I break such a habit?

H. I. D., Ohio.

Answer.—Luminal should not be taken regularly except on a physician's prescription. Even though small doses do not produce obvious symptoms, it is bad for a person to become dependent on any chemical for sleep. Sooner or later the dose that has been found satisfactory may fail; progressively larger doses have to be used, until evil effects finally show themselves.

The all important thing is to determine the cause of the insomnia. Nervousness and insomnia are generally due to an improper mode of living; an improvement in the habits of life will usually result in better nerves and sleep.

Ichthyosis

To the Editor:—Please tell me the cause and cure for ichthyosis. Do diet and bathing affect it in any way? Has it any connection with venereal disease?

B. J., Iowa.

Answer.—Ichthyosis is a congenital malformation of the skin, characterized by lack of sweat and oil and the presence of thick scales. Severe cases of this disorder have been publicly exhibited as fish-skin men.

The condition is incurable. Diet and bathing have no effect. External applications of oily preparations containing glycerin and salicylic acid temporarily improve the condition of the skin. It has no connection with venereal disease, contrary to popular opinion.

Removal of Scars

To the Editor:—Can small scars be eradicated? If so, how? Should one go to a so-called plastic surgeon or to a hospital to have a scar removed, and can one be assured that the scar will actually be eradicated? Is there any danger?

L. E. R., Indiana.

Answer.—Some scars can be removed by surgical operation, while some are made less conspicuous by other forms of treatment, including the x-ray.

Whether operation or other treatment is likely to improve the appearance of the person is something that has to be determined in each case by a competent physician or surgeon.

If the scar is small and is located in certain parts of the body, it can sometimes be removed under local anesthetic, and resort to the hospital would not be necessary. Such operations are not usually dangerous, but it sometimes happens that the subsequent appearance of the scar is no better than it was before. In fact, it may be worse.

Fasting

To the Editor:—Seven years ago I was thrown among a group of fasters, fruit and nut eaters. At that time I was an ardent disciple of these teachings; I fasted for eleven days (for no particular ailments, however, if I remember correctly). I have gradually become quite orthodox again, but the idea has persisted that a long fast, say of a week or two, is a good thing. I think if I took another such fast, I could wipe out the tobacco habit, could clear my blood, clear up my complexion, strengthen my digestion and all physiologic functions and could bring my weight to normal.

C. M., Illinois.

Answer.—In regard to the possible benefits or the dangers of fasting, not much can be said with absolute certainty today. It seems clear, however, that complete fasts (taking water as much as one pleases) for periods up to thirty or forty days can be carried out without apparent injury in healthy human adults. It also seems highly probable that a healthy human adult who habitually overeats and underexercises may profit by occasional

short periods of fasting of from five to fifteen days. In the laboratory it has been found that in healthy adult persons and in adult dogs the basal metabolic rate is augmented as a result of fasting, gastric secretion is increased and there is apparently a more economical or complete food utilization in the body organs.

As to the value or danger of fasting in persons afflicted with various ailments, there is little reliable or controlled information. Fasting as a cure-all, however, is without foundation. Of course, controlled fasting appears to be of service in diabetes and in certain gastro-intestinal disorders.

Food faddists and certain groups of physical culture enthusiasts are highly exaggerating the value of fasts as a cure of disease or of bad habits. It is true that during the fast one's inclination or ability to smoke decreases, owing to the ease with which nausea develops in fasting, but the desire for smoking is certain to return as soon as one starts eating.

The idea that fasting is a means of improving health and morals dates back, of course, to ancient times.

The statements made by most fasters are usually not reliable, because in most cases they start out with the firm conviction or belief that fasting will do certain favorable things for them. They are therefore not critical, and in most cases there are no controls.

Certainly no man should start on extensive fasting except under the guidance of a competent physician, and much more controlled experimental work must be done on the after-effects of fasting before physicians may be certain of the value of this proceeding for specific diseases.

Double Vision

To the Editor:—A woman member of my family, 48 years old, sees double with the left eye. Can you tell me the cause for this, and the cure? She thinks she did not have this trouble as a child, but is not sure. The trouble has grown more acute recently.

J. S. S., Kansas.

Answer.—Double vision, or diplopia, is almost always a defect of two seeing eyes, in that the two eyes are not parallel and see two different objects at the same time or else the same object in two different places.

When diplopia occurs upon the use of one eye alone, as in the present case, it may be due to hysteria, either conscious or unconscious, on the part of the patient. Or it may be due to a small centrally located opacity in the front part of the lens (anterior polar cataract), which divides the image coming into the eye so that one image is received to one side of the opacity and another image to the other side. An injury to or an operation on the iris, causing a false pupil, may sometimes cause diplopia.

The cure depends on the cause, and the cause can be detected by an oculist.

Eczema

To the Editor:—One of my friends has been suffering with eczema for the last five years. During this time he has tried several patent medicines without relief.

J. J. J. H., Canada.

Answer.—Eczema is a common disease of the skin. It assumes many forms and has many different symptoms.

No progress will be made with patent medicines. The sufferer should consult the best physician he can find, preferably one who devotes himself to diseases of the skin and who has had a large experience in that field.

Stone in the Kidney

To the Editor:—Two months ago, my husband made application for life insurance. The urine was found to contain small particles of blood and albumin. He was examined by a specialist, and an x-ray was taken, which showed a stone about 3 inches in diameter lodged in the one kidney. It was suggested that an operation would be necessary to remove the stone. My husband is only 24 years old and is not suffering in any way. He seems to be in the best of health and had no pains that would have suggested such a condition. Is there any possibility of dissolving this stone by means of medicine? I have heard there was a medicine that dissolved gallstones. If possible, we should like to avoid an operation.

M. B., Pennsylvania.

Answer.—A stone in the kidney is always in its beginning small enough to be washed by the urine through the tube that conducts the urine from kidney to bladder (the ureter); many stones do so pass, before or after they are detected in the kidney by the x-ray.

Since, however, the stone gradually increases in size through the deposit on it of the salts that are always contained in the urine, it ultimately becomes too large to pass through the narrow ureter. A stone measuring more than one-half inch in any of its dimensions seldom passes into the bladder; it is a permanent tenant of the kidney or ureter unless removed through surgery.

Kidney stones after removal from the body can be dissolved by certain acids; but such acids, if introduced into the kidney, would destroy not only the stone but also the kidney and, incidentally, the patient's life. Owners of various mineral springs assert that waters, drunk in large quantities through long periods of time (at so much a quart) will dissolve urinary stones; but physicians know many persons who have drunk such waters without appreciable effect on kidney stones.

The damage done by a kidney stone is not indicated by the degree of attendant pain; many such stones cause no severe pain for years. Sooner or later infection of the kidney occurs; the poisons thus produced enter the blood, causing impairment of the general health. Meanwhile the kidney itself undergoes gradual destruction. While a man who possesses only one healthy kidney may live—until something happens to this kidney also—it is obvious that kidney tissue, which is as essential to life as is the heart, should be carefully conserved at any cost.

The kidney stone mentioned is too large to pass down the ureter; it cannot be dissolved by any mineral water or medicine known to physicians; it will stay in the kidney, gradually increasing in size until removed by a surgeon. It probably originated ten or more years ago; the patient may perhaps carry it without serious pain for as many years more; or it may destroy his kidney, his health or even his life in much less time.

Because the man is now younger and hence better able to stand an operation than he will ever be again, and because his kidney is less damaged now than it will be later, an immediate operation seems the only wise course.

Tuberculosis of Hip Joint

To the Editor:—Will you give me some information concerning the development of tuberculosis in the hip joint after the receipt of an external injury to that joint. The instance is that of a child about 6 years old, who in playing was injured by another child.

L. G. B., Virginia.

Answer.—Injuries fracturing bones that enter into the formation of a joint rarely, if ever, cause tuberculous infection of the involved joint. Children, however, are constantly receiving small injuries by falling and by various other accidents of inexpertness, and it is probable that these small and oft-repeated injuries have their influence in locating the germs of tuberculosis that have already entered the body by the alimentary

or respiratory tract. Another condition suggesting the influence of injury is the fact that joints of the lower extremity are much more frequently involved than joints of the upper extremity that do not support the weight of the body.

The care of tuberculous joints is fundamentally rest, with good hygiene. Both these factors are best secured by the aid and advice of a good orthopedic surgeon. Tuberculosis of the hip with proper care usually recovers as far as the presence of recognizable infection is concerned, and the pain subsides; but, except in rare instances, there is definite limitation of the joint movement. This, unfortunately, is permanent.

Infant Feeding

To the Editor:—My baby was born, March 4, 1926. I nursed him for three weeks and then, because of badly cracked breasts, I was forced to use artificial feeding. I gave him a formula of cow's milk and Dextri-Maltose, but this caused colic and protein and casein curds in the stool so I put him on sweetened condensed milk. Would it be wise to continue feeding him this until after hot weather? This agrees with him as far as I can tell. I do not allow him to gain too rapidly as many people say that condensed milk makes babies overfat and gives them little resistance. I give a teaspoonful of lime water in his food twice a day and orange juice and pure cod liver oil once a day between feedings. Should I now go back to some formula of modified cow's milk? Is there any danger of milk being poisoned by the cows eating weeds in summer?

R. E. I., Iowa.

Answer.—Condensed milk is cow's milk evaporated to about one-third its volume, with an equal volume of cane sugar added. It usually contains over 40 per cent cane sugar, about 12 per cent milk sugar, 25 or more per cent water, and about 2 per cent ash. That leaves about 20 per cent for protein and fat. Any food of such composition is seldom a safe food for infants, except for a short period of time. It lacks or is deficient in vitamin C.

Condensed milk, especially that artificially sweetened, has a limited field of usefulness in infant feeding. If properly diluted, it may be used in exceptional cases for a short period when the infant needs a food very high in sugar and low in other constituents. Because of its extremely high sugar content, it is impossible to make a dilution approximate the proportions of fat, protein and sugar as they exist in breast milk.

On account of its cheapness, palatability and ease of preparation, condensed milk still enjoys a waning degree of popularity, which it does not deserve. It has caused much harm to many infants. The few infants that apparently thrive on it would most likely do well on any food. An infant kept on it for months is usually greatly handicapped.

Milk does sometimes contain a poisonous substance when certain plants are eaten by the cow, just as it may acquire a strong taste when the cow eats wild onions. The instances, however, of poisoning children from this source are very rare. It has occurred when children are fed on the milk of one cow. When milk from a mixed herd of cattle is used (and that is always to be preferred), such poisoning could hardly result.

Yeast

To the Editor:—What effect has yeast on the digestive tract? Should it be eaten between meals?

R. J., Canada.

Answer.—Yeast is a laxative for some persons. It makes little difference whether it is eaten between meals or with the meals. It contains two of the vitamins, but as these are to be found in abundance in fruits, green vegetables and milk, yeast is not a necessary article of diet.

Regularity of Habits

To the Editor:—When is a man in the best condition—when he eats, sleeps and performs bodily functions only when necessary and possible, or when he adopts rigid regularity in all habits, eating because it is mealtime and not because he is hungry, sleeping because it is bedtime and not because he is sleepy, straining at stool at a regular hour when there is nothing to evacuate, or a common-sense medium between these two kinds of living? Does eating between meals upset digestion? What effect has fruit, when eaten between meals or at bedtime, when there is still food in the stomach?

R. J., Canada.

Answer.—It is probably true that primitive man ate only when hungry; more probably he ate when food was to be had, and then went long intervals without any. The time of bowel movement was likewise indicated by inclination.

In our modern, complex social life, such a plan is inconvenient and impracticable; therefore, we eat at regular intervals and adjust our other functions to regular periods. Fortunately, the human body, with rare exceptions, adjusts itself to this arrangement, and appetite comes to correspond with mealtime and inclination to bowel movement comes at regular periods. However, occasional departures from the rule are not always important.

Recent studies have shown that the so-called hunger curve, as shown by the movement of the walls of the stomach, recurs at regular intervals.

Eating between meals should be avoided by most people, but some find it does no harm. Some fruit, such as an orange or apple eaten in the midforenoon or afternoon, does not upset the digestive action and bowel movement.

Syphilis

To the Editor:—I had three blood tests made at periods of one month apart. The first was three plus, the second negative, and the third two plus. My doctor advised that there was undoubtedly an infection, though latent and perhaps acquired before birth. Were my tests proof positive of my having syphilis? If I have it, is there hope that I can be absolutely cured beyond any possibility of giving it to a wife or children?

R. G., Washington.

Answer.—The Wassermann reaction is a symptom of syphilis. That being the case, a positive reaction should be confirmed by a positive history or positive clinical signs. If, in the absence of both of these, a distinctly positive reaction is obtained on different occasions in different laboratories of high grade, it should then be given attention. Cases of this kind should be reviewed by a physician experienced in the study and treatment of syphilis.

Concerning the specific case described, there is much doubt as to the presence of infection; and that being the case, it is difficult to answer the last question further than to say that it would be impossible for this man to transmit the disorder to children unless he gave it to his wife first, and the latter circumstance would be unusual.

Varicose Veins

To the Editor:—What is good for varicose veins? Is a rubber stocking advisable?

C. M. G., Pennsylvania.

Answer.—Varicose veins of the legs are helped materially by an elastic support. Better than stockings is a rubber bandage. Stockings soon cease to give support as they become stretched, but with a rubber bandage the amount of support can be adjusted to a nicety by the manner in which the bandage is applied. Either a pure rubber bandage or a webbing bandage can be used for this purpose.